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THE

FARMER AND GARDENER,

AND

LIVE-STOCK BREEDER AND MANAGER;

SUCCESSOR OF THE

AMERICAN FARMER.

I. I. HITCHCOCK, EDITOR.

VOL. I.

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BALTIMORE:

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THE FARMER & GARDENER;

AND LIVE-STOCK BREEDER & MANAGER.

CONDUCTED BY I. IRVINE HITCHCOCK, AND ISSUED EVERY FRIDAY FROM THE AMERICAN FARMER ESTABLISHMENT, AT $5 PER ANNUM, IN ADVANCE.

No. 1. **BALTIMORE, MAY 9, 1834.** **Vol. I.**

☞THIS publication is the *successor* of the late **AMERICAN FARMER,** (Which is discontinued,) and is published at the same office on the following

TERMS:

1. Price, five dollars per year, payable in advance. ☞When this is done, 50 cents worth of any kind of seeds on hand will be delivered or sent to the order of the subscriber with his receipt.

2. The *manner* of payment which is preferable to any other for distant subscribers, is by check or draft on some responsible party here, or else by remittance of a current bank note; and to obviate all objection to mail transmission, *the conductor assumes the risk.*

3. Subscriptions are always charged BY THE YEAR, and never for a shorter term. When once sent to a subscriber the paper will not be discontinued (except at the discretion of the publisher) without a special order, on receipt of which, a discontinuance will be entered, to take effect AT THE END of the current year of subscription.

4. Subscribers may receive the work either by mail in weekly numbers, or in monthly or quarterly portions; or else in a volume (ending in May annually), handsomely pressed, half bound and lettered (to match with the American Farmer) by such conveyance as they may direct: but the $5 must in all these cases be paid in advance.

☞ADVERTISEMENTS relating to any of the subjects of this paper will be inserted once at one dollar per square, or at that rate for more than a square, and at half that rate for each repetition.

American Farmer Establishment.

BALTIMORE: FRIDAY, MAY 9, 1834.

INTRODUCTORY REMARKS.

The undersigned begs leave to tender his profound respects to the public, especially to his former and present patrons, customers and friends, and to introduce to them this new offspring of his industry. Probably most of the subscribers to the late AMERICAN FARMER who may see this sheet, will learn from it for the first time the fact that that "ancient and honorable" publication, the pioneer and father of American Agricultural periodicals, is discontinued. In regard to the *wherefore* of this occurrence, suffice it to say, that it has been caused by one of those reverses of fortune which await all men, and overtake many. In December last the subscriber found it necessary to transfer the entire "property of and in the American Farmer," to other hands—its publication was continued to the end of the then current (15th) volume, and at that point (7th of March last) suspended. Since that date no number has been issued, nor is the writer of this aware that it is intended to resume the publication.

Under this impression, and believing that the subscribers to the American Farmer, and especially the agriculturists of Maryland, are more than willing to receive and sustain an agricultural paper identical with, or similar to the late publication, the subscriber (late proprietor and conductor of the American Farmer,) has commenced the work of which this is the first number, and will continue it so long as the farmers and planters of the United States shall deem it worthy of their support. The size of the sheet and the general plan of the work are the same as those of its predecessor, and like that it will be strictly confined to its legitimate object—THE PROMOTION OF THE AGRICULTURAL INTEREST OF OUR COUNTRY.

The improvement of our domestic animals is an object of so much importance to farmers, that we have thought the subject worthy of a conspicuous place in the plan of our new work, and we shall exert ourselves specially to promote this interest. We have much highly interesting matter on hand for this department which has not yet been published in this country, and we are promised assistance by several of the most eminent breeders, graziers and dairymen in the United States. We ask for contributions on *all* subjects appropriate to our purpose, begging our friends to consider that no more can be read than is first written. Party politics and religious discussions will be *wholly* excluded, and the diffusion of *general intelligence* will be left to its appropriate vehicles, the newspapers, while the improvement and management of the farm, of the kitchen, fruit and flower garden, and of the farmer's live-stock, together with a *correct* and pretty minute statement of prices in the foreign and home markets for agricultural products, will form the burden of *our* columns. A miscellaneous department is an indispensable appendage of every periodical, and must therefore have a place in ours. One page will be devoted to advertisements, and the 52d No. of each volume or year will consist of a title page and index to the volume.

As to the sources from which we intend to draw the matter for our sheet, we will make but one promise—we won't *steal* nor *plunder*, but we will restrict ourselves no further than this—we intend to take in an honest way, *good matter* wherever we can find it, without caring much whether it ever was or was not printed or read by others than our subscribers before its appearance in our columns.

Thus we launch our little vessel on the sea of public opinion—we hope its contents will be esteemed valuable, and we are almost sure its model and whole exterior will please the eye. Should the favor of the public rise into a breeze we shall be gratified—a gale, we shall be delighted, and would strive hard to weather a "pretty considerable" hurricane of this description. Indeed, the only weather we would much dread, and that we fear very little, is a dead calm.

I. I. HITCHCOCK.

A FRIENDLY SUGGESTION.—Owing to the removal of our *private* deposites last fall, and the consequent deranged state of our currency at present, we venture to ask very respectfully, but very anxiously, that those of our friends who are willing to give us a lift in our new undertaking, will favor us with the $5 for this year as early as convenient. We cannot print a single number without paying cash in hand for every cent that it costs. We are therefore compelled to ask payment in advance, assuring our subscribers that there is no reason to doubt the permanency of the publication. Our patronage *in good names* is already sufficient to pay the expenses for a year. Let each *pay* his mite, and there is no danger of a deficiency.

EXCHANGES.—To those Editors of country papers who may desire to exchange with us, we present our respects, and beg to observe, that from the nature of our publication two things must be apparent—1st, that the generality of country newspapers, however excellent, can be of little value *to us;* and 2d, that the advertising of our establishment *is very important.* We therefore request such assistance in this respect as our cotemporaries may be willing to extend to us, and will cheerfully establish an extensive exchange list with this view. Those papers will have a preference which shall come to us with our "general Advertisement," copied from the last page of this number.

☞All money paid for the American Farmer beyond the end of the 15th volume, will be credited on the subscription to this paper.

☞All persons to whom this paper shall be sent who shall *decline* being subscribers, are requested to return this No. with their name and post office written upon the margin.

THE FARMER.

[From the Farmers' Register.]

ON IMPROVEMENT OF LANDS IN THE CENTRAL REGION OF VIRGINIA.

To the Editor of the Farmers' Register.

Sir,—It is highly gratifying to your particular friends, to find that your periodical has produced such an impression through the country. It must be truly gratifying to every patriot, and especially to every Virginia patriot, to find the whole community so generally aroused on the subject of improving the soil, and so generally believing that something greatly valuable will soon be effected.

But, sir, we may fold our arms in the indulgence of these joys and hopes, and all that you can publish will be as an idle dream, unless your readers will resolve, each for himself, that practical benefits shall result to him, from the instructions contained in the Register. I am old enough to remember that when the great agricultural patriarch of Virginia first published his Arator, his opinions were in the mouths of every body; and I was then *young* enough to believe confidently, that all Virginia would soon be a perfect garden. But what has followed? A few, possessing soils primitively rich, have derived great advantages from pursuing Col. Taylor's system: fewer still have ingeniously adapted the system to poorer soils; a much smaller number, residing on lands called, in the Essay on Calcareous Manures, "poor acid soils" have, by strictly adhering to the "four shift system," been able barely to keep their noses out of water; while much the largest number, even of those who made the loudest noise about Col. Taylor's writings, have not obeyed a single precept contained in them. Many a pert school boy, is willing to sink to the dogs, if he can only make the impression that he is a lad of genius, and might be a clever fellow, if he would. I know some such, and anxiously wish they would take the hint. In agriculture, the older school boys, I fear, are in a more hopeless condition—for they pretty generally have been formed out of the young ones, and have the habit of indulgence almost petrified into a natural propensity.

Prosperity in any business must be preceded by a knowledge of the obstacles to improvement and success—by the arrangement of a regular plan of operations, and by a fixed determination to remove those obstacles, and to pursue rigidly such a plan, regardless of the difficulties which may interpose.

The obstacles to improvements in central Virginia, (for which portion of our state these remarks are chiefly intended,) are 1st. The impoverishment and exhaustion of so large a part of our land, and the scarcity of means for its resuscitation; 2d. The almost total absence of calcareous manure; 3d. The extreme liability of our climate to drought; 4th. The cultivation of tobacco; 5th and last, and very far from being the least, the employment of slave labor.

These heads might furnish matter for a large volume, but the writer, though in the condition of Burns, when doubting whether he should write a song or a sermon, hopes to confine himself to the limits of one or two essays.

1. The poverty of so large a portion of our soil, might operate much to discourage in attempts at improvement, did we not know that it had once been fertile; and the adage, that *what has been, may be again*, is so entirely admitted by most of us, in this matter, that we should be inexcusable were we to make no attempt to restore our country to its original fertility. It was said by our great Henry, on some occasion, soon after the revolutionary war, "since the achievement of our independence, he is the greatest patriot, who *stops the most gullies*." The powerful mind of this wonderful man, with almost the spirit of prophecy, could forebode the present impoverished condition of our soil, from the then existing modes of cultivation; and probably adopted this striking form of expression, as best calculated to awaken the attention of others. The inventive spirit of the age has provided a plan for the arrest of gullies, which have, in some sections, made such ruinous inroads on our lands. Horizontal ploughing and hillside ditching will, if skilfully executed, effectually put a stop to their increase. And time, which destroys all things, will destroy the gullies, when their causes are removed. But when the effects of washing rains are obviated, the means of filling gullies, either by throwing in rubbish, forming barriers across them, or causing grass or trees to grow in them, are not of difficult application.

The same kind of ploughing and ditching which so admirably provides against the formation and increase of gullies, constitutes one of the best means of resuscitating the exhausted soil. Evaporation has been pronounced "the great thief of manure." However readily we admit the insidious purloinings of this culprit, we are inclined to think, they bear but a small comparison with the ravages committed by heavy falls of water, which like a tyrannic destroyer, frequently sweep nearly all the soil at once. Even when from tenacity of the soil, or some other cause, it is not swept away, its fertility is greatly diminished, by the running off of a great portion of those soluble matters, which constitute, perhaps, the best manures. Skilfull ploughing and ditching, by giving the water a more gradual discharge, allow time and opportunity for the disposition of much of these soluble matters, and their retention by the land. Whoever has much observed land horizontally ploughed, must have remarked the quantity of trash and colored foam which settles in the water furrows. All this, and even much of the solid soil itself, if the lands are not skilfully ploughed and ditched, must be washed away by great rains, which we consider the greatest spoilers of the soil, not even excepting the ravages committed by the teeth and hoofs of grazing animals.

When the evils of washing rains are well guarded against, the lands rigidly kept enclosed, (i. e. secured from being grazed,) and a judicious course of crops observed, we hold that the foundation is laid for the renovation of the soil. Time, the great destroyer, is also the great restorer; and will inevitably—if man diligently puts matters in a proper train—bring back the land to its primeval strength. The term required for the accomplishment of this desirable end, must depend on the original constitution of the soil, the degree to which it may have been exhausted, and the rotation of crops observed. Under even the most auspicious circumstances, it might not accord with the interest or the inclination of the good farmer, to await the tedious operation of natural causes, in the restoration of fertility to his land. He will, of course, inquire for some means whereby he may hurry the operation.

We complain much of the scarcity of the means of improving our lands. It may well be doubted whether such complaints are reasonable, while we so constantly fail to avail ourselves of such means as do exist. It is often said hereabout, "the people in Eastern Virginia may well talk of improving land, when they have such rich beds of marl, with which they can easily quadruple the value of their lands; if we had such an advantage, we would directly go to improving too." When beholding the blessings enjoyed by others, we are prone to overlook those beneficently lavished on ourselves. Though we may be denied the use of marl, yet we have a soil better calculated to retain putrescent manures, than most of that in Eastern Virginia. Who among us has yet exhausted the means supplied by nature for the improvement of our lands? It is true, some of us—rather carelessly though—use the offal of our corn and wheat crops to that end. We all know that oak leaves, and we are told in the "Register," that pine leaves, make good manure, when fermented in the farm pen or stable yard. Yet few of us gather many of them for such purpose, and many of us call it "robbing Peter to pay Paul:" yet Peter loses but little by it, more than the winds and the rain would carry away from him; and after all, it is but forcing him through Paul to pay his own taxes. All of us call ashes one of the best manures. Yet who has an ash house? The writer knows but one in the county in which he resides. Who does not know that the excrement of sheep and hogs makes excellent manure? Yet how many pen these animals with a view of obtaining it?—How many among us have made a fair experiment of the adaptation of gypsum, as a manure, to their lands? We have long known, that clover, as a meliorating crop, possessed great fertilizing powers. How few of us have been benefitted by this knowledge on an adequate scale? How many sow oats, buckwheat, or any other article, with a view of turning them in, for the benefit of the land? A single example of this was afforded in the seventh number of your Register. Who has hauled clay upon sandy land, or sand upon clay, with a view to improvement? In short, sir, I have just discovered that I have given the wrong heading to this branch of my subject. Instead of complaining of the scarcity of the means of improving land, I should have set down as the chief obstacle in effecting a matter so desirable, the ignorance, apathy, and procrastination of our people on this subject. Yes, sir, and prejudice too—for there is prejudice, and that sometimes among men of no inconsiderable standing. But the great mass of people in my vicinity are thoroughly convinced, that whether it be practicable or not to improve our lands, the old system of cultivation must end in ruin to our farms. And that end, with many of us, is already in sight. To "*give up the ship*" is what we cannot bear to think of; and we look, sir, to the Register, in a great measure, to guide and to stimulate us to a more correct course of ma-

nagement. It is pleasing to observe that not those alone specially engaged in agriculture, but that professional men, merchants, and mechanics, are taking a strong and patriotic interest in this matter.

2. The little belt of country, mentioned by a writer in your first number, containing some beds of weak argillaceous marl, forms but a speck, in comparison with the extent of country denied the benefit of calcareous manures. And though it is hoped that new sources of these manures may be discovered, yet until this is done, we should direct our efforts according to the means enjoyed. It is usually needless to talk much about irremediable privations. Our wants in this respect are only mentioned from a desire to excite inquiry regarding their relief. Admitting the correctness of the theory, that the failure of gypsum to act on some soils, is produced by an acid in the earth, which, by combining with the lime in gypsum, decomposes it, may we not look to ashes, as, in some measure, a remedy against this evil? A few bushels of ashes sown on an acre of such land, might furnish employment for the acid, for a sufficient length of time to allow the plaster to act upon young clover, so as to secure its life and vigor. Even if the ashes should fail to answer this purpose, their own direct benefit upon the crop would doubtless be fully equivalent to the trouble and expense of the operation. The scarcity of ashes would form the only limit to the benefits derivable from this source. Of this, however, we have no right to complain, until we have made every exertion to procure and apply all of the article which may be attainable.

The theory of acidity in the earth, and its effects as developed in the "Essay on Calcareous Manures," is certainly new, and I believe generally admitted by such agriculturists, in this section at least, as have any acquaintance with chemistry. Its discovery and admission will, however, be unavailing, unless it be duly admitted to the rank of a practical guide. In countries abounding with calcareous manures, the remedy against acidity is always at hand. But where this advantage is denied, it may be proper to inquire, whether the enemy may not be combatted in some indirect manner. Our best soils are sometimes prone to produce acid vegitation, when kept a long time ungrazed and uncultivated. I infer from this, that two things very dissimilar in themselves, may produce the same results. Col. Taylor, in his Arator, very distinctly remarked, the fertilizing effects of both grazing and aration, when judiciously conducted, and the impropriety of mixing the two systems together. If the symptoms of acidity follow abstinence from both systems, it would appear to leave us the inference, that a strict adherence to a standing pasture, and a well regulated rotation of crops, stand among the safeguards against the evil. That a piece of ground long kept in pasture, becomes exempt from those kinds of growth indicating acidity, is manifest to all who have taken the trouble to observe. And I believe it equally certain, that lands frequently stirred with the plough and hoe, enjoy the same exemption. Whether this arises from the mere intermixture of the particles of earth, or from the exposure of the same, to the influence of the sun and atmosphere, is not determined; but I judge, that the sun has the chief agency in this matter.

Much of this acidity appears to be produced by the decomposition of foul weeds, which are permitted to grow on the land. If this be correct, it might be proper, not only to pay more attention than we usually do, to the extirpation of these nuisances, but to bestow on the land good manure, to the greatest possible extent. And we do not thus merely nullify the evil, but the acid, which when alone, operates as a corroding canker on the crops, will, after combining with certain materials in the manure, form salts, affording to them the most nutritive aliment. We seldom find sorrel growing on a properly manured tobacco lot. When you apply calcareous manures on your lands, you both neutralize the corrosive power of the acid, and treasure up a store of salts for the nourishment of plants: and you do this directly. We, perhaps, do nearly the same thing, by the application of manure—but in a manner less direct, and with effects less permanent. In whatever state you apply manures on soils rendered calcareous, the lime is ready to form its combinations; but on acid soils, it may be necessary to be particular as to the condition of the manure, as it is said that both fermenting and overheated manure abound in acid. You probably possess this further advantage over us, that you have constantly in your soil, after marling, a material fully charged with, and possessing so strong an affinity for, carbonic acid—one of the principal aliments of plants—that however rapidly it may be abstracted by their roots, a replenishment from the atmosphere, will speedily occur. In all cases, whether the soil be calcareous or not, it is probable that acidity is wisely provided by nature, and that the business of man is, to prevent its evils and secure its benefits.

Another mode of contending with acidity may be sought in the application of what may be termed telluric manures. These may be applied not simply with the view of changing the consistency of the soil, by mere mechanical admixture, as when sand is applied to clay, but with the hope of affording to the soil an increased capacity of combining with manures. As the number of ingredients is increased, the chances must increase for chemical combination. The advantages frequently derived from removing earth from one spot and placing it on another—from spreading the clay and other matters from cellars and pits, on the surface of land, must be familiar to all. In an extract from the writings of Professor Eaton, in the fourth number of the Farmers' Register, a variety of rocks are mentioned, which when pulverized, give fertility to the soil. Some of these are very abundant in many parts of our middle country, and most of them have some lime in their composition. This is almost a new subject in agriculture, and offers rewards abundantly sufficient to encourage experiment.

If these views have any foundation in truth, the tendency of our lands to produce acid may be turned to advantage, if they are properly managed, notwithstanding the great detriment it seems to cause, while they are neglected and abused. The luxuriance of their crops, when highly manured, is truly remarkable. No part of the world produces finer crops of wheat, for example, than the richest lots in our middle country.

3. The great liability of our climate to drought, is a matter which we cannot avoid; yet, we may in some measure guard against its evils. One of the best modes of doing this is, to direct our attention to a great variety of crops, some of which may be less affected by drought than others, and some, by taking the whole season for their growth, avail themselves of such parts of it as are not dry. The different kinds of root crops, for the most part, possess this property. Their value, as food for stock, is little known in this district: for except, in a small way with turnips, the experiment has very seldom been tried. Our soil and climate, however, seem to be well adapted to its growth.

The artificial grasses are also well calculated to supply any deficiency in the corn crop. These, however, have met with but few friends, if we judge from the attention paid to them. I know a gentleman, who has been in the habit of having his working horses held to a volunteer crop of gama grass, growing on a piece of very sandy low ground. It is reported to have answered, in this way, well. This should be encouraging to such as propose bringing this article under cultivation.

Rye and oat crops, both of which are very uncertain as generally managed, may, if sown in good time, on ground properly prepared, be considered pretty sure crops. Rye, to succeed in this part of the country, must be sown about the last of August or early in September. Oats rarely succeed when sown as late as April and May. But sown, on ground sufficiently dry, in January, February, or very early in March, they seldom fail.

Irrigation has been so little practised in Middle Virginia, that we are almost left to conjecture as to the amount of benefit to be expected from it. No one doubts its efficacy on grass lands. I have known it very successfully tried on both corn and tobacco. We would all, perhaps, be surprised to find—which we might very readily do by a little attention to levelling—how much land may be brought under the influence of this art. We would also be, perhaps, surprised to find how much our crops would be increased, by having only a small portion of land irrigated. It is said that in Italy, those who are unable otherwise to water their lands, willingly give half their crops for water, from the public canal, made for the purpose of irrigation.

4. Little need be said of the tobacco crop as affording obstacles to agricultural improvement. It has long been charged with being the chief cause of our difficulties; and as usually cultivated, it has long merited the accusation. It may, however, well be questioned, whether the charge be not more applicable to the management, than to the crop. We suffer it to become the great monopolist both of our manures and our attention, and then scold, because grounds cultivated in other articles, become poor. It certainly is not, in itself, a great exhauster; but occupying all the land that the planter can annually manure, and all that he clears, taking the very gleanings from the other fields of the farm, it leaves them in the condition of those portions of a country unprotected by the government. If the fertility of its lots were preserved, by ploughing under oats, clover, or some other meliorating crop, after the manner of Mr. Old and others, then all the manure might be dis-

tributed over the farm, and very different effects would follow. Such a removal of "*deposites*" as this would doubtless prove salutary.

With the prices obtained for our tobacco during the last fifteen years, we must go back to the good old fashion of wearing homespun—banish foreign luxuries from our tables, and raise our own meat; or, we must improve our avenues to market, so that other crops may bear transportation: or, lastly, we must build up towns and villages, and erect manufactories, and thus bring the consumers to the crops.

Action and reaction are as perfectly equal in commerce as in physics—and restriction on the foreign articles given in exchange for our tobacco, limit its foreign use, and recoil upon the producer in the reduction of its price, as certainly as if a duty were imposed upon its exportation. The time was when we rarely heard of a mortgage on land, and some disgrace attached to the mortgager. Now, in some neighborhoods, half the land is in this condition. In some neighborhoods also, a man can hardly be found, who is not waiting for something approaching to a fair price for his land, that he may sell and remove to the "far west." Is there no help for these things? So far as the people are concerned, it can only be remedied by practising the most rigid economy. But changing national habits by common concert is too difficult to be expected. Our legislature might levy such a tax upon merchants, as would give us all the sweets of "domestic industry," brought home to every man's business and bosom. This glorious system of "American industry," thus pushed to its last extreme, might afford every body an opportunity of judging its merits, if it did not satisfy its greediest advocates. Fight the devil with fire.

Improving our avenues to market, is also, in part, a subject for the consideration of our legislature. With the best possible facilities for transportation, the single county of Charlotte might, probably, under a good system of agriculture, produce from one to two or three hundred times its present amount of wheat for market. Whenever transportation becomes cheap, we will not be confined, as at present, to a single marketable crop, and the surplus carriage which is now paid, even of that crop, will be added to the planters' profits.

Virginia has long labored under very peculiar disadvantages. Nineteen twentieths of the labor being agricultural, we have few consumers at home for our surplus products, and our means of transportation being miserable, a great part of the state has been able to raise little besides tobacco for market. A new era seems to be commencing—whether for good or for ill, time must determine. The simple grandeur of the Ancient Dominion has departed, perhaps, forever—and cannot long be enjoyed by any country. With very little trade—but that free and simple, and with a hard-money currency, the days of the wooden trencher and pewter plates and dishes, were glorious days—when every man understood and minded his own business. Now, many a planter furnishes a carriage for his wife and daughters to ride in, costing more than the legacy he could bequeath to each of his children. Towns, villages, and manufactories are beginning to be erected—internal improvements are much *talked of*—and every man is a politician. If things progress as they have done, for a year or two past, we shall soon have consumers enough in the bosom of the state, for our surplus commodities; and much more abundant encouragement, than heretofore, will be afforded to improvement in agriculture. I fear, however, this will not be accompanied by an improvement in morals. Extremes sometimes work the cure of their own evils. The "restrictive system," which, like a north easterly blast, has so long benumbed our energies, may force its handicrafts upon us, and bring to us some good with its evils. Whether we have not already weathered the worst of the storm—let politicians determine. Within the last three or four years, I learn, that several thousand laborers have engaged in manufactories of one sort or other.

5. Having utterly wearied myself with the length of this article, I beg pardon of the reader—if there be any—who should have waded thus far into it. Being astounded by the magnitude, and lost in the intricacies of the remaining part of the subject, we shall say but little on it. Admitting that slave labor is less profitable than free labor might be, what shall we do with the negroes? For an answer to this question, shall we go to those for advice, who are perfectly ignorant of the subject? Shall we sell the slaves to traders? Many of us have purchased them at exorbitant prices, purely to save them from the clutches of these gentry. Shall we turn them loose among ourselves? This would be ruin to them, to us, and our children, and treason to our country. Shall we send them to Africa? Where are the means? Professor Dew has most ably demonstrated this to be impossible, and I am glad that Mr. Duff Green has stereotyped the essay, and sells it at only six dollars per hundred. Our merchants should scatter it through the land. In this age of crusading benevolence, there are some, whose charity, instead of beginning at home, never was there—it is ever wandering to distant regions enchanted by the vast scope of its own excursions. Whatever be the designs of these people, their conduct tends more to intermeddle with, and diminish the comforts of their beneficiaries, than to remove their burthens. But glorying in their desire to do good, they care not for consequences, or the means used.

The mutual ties between master and slave are much weakened, and we shall be compelled to draw the reins of discipline much tighter than heretofore. But it should be done in mercy and in kindness. Every good farmer should, at least once a day, see each one of the brute animals on his farm. How much more are we bound constantly to attend to the comfort of our slaves! We should preserve a daily intercourse of dignified firmness, and humanity with them—watch over their moral and religious instruction, and keep no more than we can faithfully superintend. This seems to be the only way open, to diminish the evils of our condition. In the developements of futurity something better may be indicated.

M. N.

Tobacco.—The quantity of tobacco raised in Ohio the past year, is estimated at 14,000 hhds. which is nearly double the crop of the year preceding.

THE GARDENER.

A Chapter on Gardening.

To the Editor of the Farmer & Gardener:

Dear Sir:—You ask me to give you a chapter on Gardening. In complying with your request, I must premise that whatever opinion I may advance, is the result of my own experience. Cobbett, I believe, is now the most approved authority, but I have never consulted either Cobbett or any other work on Horticulture; and if I differ from him and others, you will please set it down not as the result of theory, but of practice. My remarks will be confined exclusively to the cultivation of vegetables; and may possibly draw forth other observations from persons who have had more experience, and possessing a greater capacity for treating the subject than your humble servant can pretend to.

There is, unfortunately, too little attention paid by farmers, particularly in this section of the country, to gardening, either culinary or ornamental. Generally their utmost ambition extends to a patch, known more commonly by the unclassical appellation of a truck-patch—where they raise, I can scarcely say cultivate, potatoes and cabbage, with now and then a sprinkling of beets and parsnips, garnished by squashes and broom corn. Engrossed by their crops of wheat and corn, they pay little or no attention to horticulture, and *grow* the few vegetables they have occasion for, on the old system of their fathers and grandfathers. This is to be lamented, and if some person who has time, talent and experience to guide him, would turn his attention to the subject, and by proper illustrations and practical remarks, awake them to a sense of the importance of horticulture, and draw their attention to its usefulness, he might proudly claim the title of a public benefactor.—Such a result, however desirable, cannot be attained by *books;* works of the kind are generally too diffuse—they abound in technical terms, and those terms are not understood by the great mass of the population. Another objection is, that few farmers read works on gardening, and still fewer purchase them. How then can they be impressed with a due sense of the importance and advantage of horticulture? it can only be done through the medium of a periodical; which, treating upon topics important to the farmer, in the regular course of his crops, may at the same time convey to him the information and experience of others in the cultivation of vegetables, and thus gradually draw his attention to the subject. There is a Spanish axiom that "a sage can gather wisdom from a child." Although some productions of my garden have been favourably noticed, I consider myself a mere tyro in the art, and furnish this in the hope that persons more capable may be induced to follow my example, and give you the result of their experience.

M.

(To be continued.)

[*From the Gardeners' Magazine.*]

On Growing large Gooseberries for Exhibition.—By Mr. *M. Saul.*

Sir: In the year 1827, I sent you an account of the mode then practised in this county, of training gooseberry trees, so as to make them produce

large show fruit. At that time, it was generally supposed that to obtain fine show gooseberries it was necessary to train the trees; and that, if so treated, in five or six years they would be found to have become strong, and would be sure to produce large fruit. The result of seven years experience, however, proves that training is quite unnecessary. Gooseberry bushes are only found to produce fruit suitable for exhibition when they are four or five years old; because the fruit after that age decreases in size, though it increases in number. Gooseberries rarely, if ever, produce fruit of a very large size for more than two years together; and generally only one season. The mode usually now practised here is, to take a gooseberry tree out of the nursery in its second year. The next year (being the first after transplanting) it is not allowed to bear any fruit; but the year following, that is, in the fourth year of its age, it is in its prime, and will produce its largest and finest fruit. We seldom hear of the same tree producing equally fine fruit for even two years in succession: the Bumper, which produced the largest berry in 1832, weighing 30 dwts. 18 grs., this year (1833) did not produce any berry weighing above 22 dwts. 5 grs.; and many other examples might be given. M. Saul.

On propagating the Purple Broccoli from Slips, *and on the Agency of Manure prepared from Sea Weed, in improving various* Vegetables.—By Mr. *T. Rutger.*

Sir: On reading Mr. Kendall's article upon the propagation of cabbages from slips, I feel inclined to draw the attention of your readers to the growing of purple broccoli in the same way; a practice which was adopted, some years since, in the west of Cornwall, and, for aught I know, may be still continued there. The variety thus treated seemed to be rather peculiar in its habits, and compact and handsome in its growth. The head being removed for culinary purposes, the method was to let the stump remain, which had already thrown out sprouts* below; and these, on being left to grow, showed no indication to form heads for that season. In the month of June, the sprouts were sufficiently advanced to be clipped off; and, after being exposed a day or two in the sun to cauterise the wound, they were planted out in the usual manner. In two or three weeks they had taken root, and in the course of the autumn made fine stocky plants. I have seen many instances of the broccoli thus grown having heads three feet in circumference, and as close and compact as possible; but this extraordinary luxuriance was, I believe, principally owing to the nature of the manure used.

This manure consisted principally of sea weed, of the genus *Ulva*, several varieties of which are drifted on the sands in immense quantities in stormy weather. The weed forms a principal article of manure to the farmers, as well as to the market gardeners in the neighborhood of Penzance and other parts in the west of England, and is sought with avidity by both classes after a heavy gale, it being found, from experience, to be an excellent manure for a single crop. The farmers in that neighborhood mix it up with earth collected from furrows ploughed at certain distances in the field, and with sea sand, and, thus mixed, it rapidly decomposes, and soon becomes fit for use. The market-gardeners and cottagers frequently make use of it as a manure, in its raw state, for onions, potatoes, &c. For onions, the ground is so prepared, that, after a layer of it is spread over the surface, there may be a sufficient quantity of earth to cover it about two or three inches thick; after this has been levelled, the seeds are sown and raked in, and the produce, in many instances, is but little, if any thing, inferior in size to the onions imported from Lisbon. For potatoes, it is used either by putting a layer of it over the sets, whether in furrows or beds, and afterwards covering it with earth; or putting a layer of it first, placing the sets upon it, and then a covering of earth. In reference to the kidney potato, I think I may safely aver, that in no part of England are potatoes of this description to be found equal in quality to those grown in the neighborhood of Penzance; where, by extraordinary labor and care, they are frequently brought to market from the open ground by the middle of May. The sort principally grown for an early crop is known there by the name of "the Yorkshire kidney." I am not certain if this be its proper appellation, but it forms a long, handsome, flattish, tuber, with the crown of a purplish hue.

With regard to the broccoli noticed above, in the ordinary course of garden culture, it forms a head averaging about two feet in circumference; its flavour is excellent, and, as such, it may be well recommended to notice; more especially as, by its being propagated from slips, it is secured from any variation from its natural habit.

I am, sir, yours, &c. T. Rutger.

Shortgrove, Essex, Oct. 1833.

On the mode of securing a supply of young Carrots throughout the year.

By Mr. *T. Rutger.*

Sir: In cases where young carrots are required all the year round, the following mode of culture will be found to answer in producing them.

In the first week of August, sow a crop of the short-horn kind in a cold frame, and a crop to succeed it in the third week of August, also in a cold frame, the latter of which will be at least two months after the first in coming in. Early in January sow a crop on a slow hot-bed, under glass; and early in February, on a slow hot-bed, under hoops and mats; in the succeeding months, sow occasionally in the open ground.

The above brief directions are, of course, sufficient, as there is no occasion for entering into details about soil, thinning, &c., which every one conversant with gardening knows: but perhaps a question may arise as to the necessity of sowing in frames in the month of August: it must, therefore, be understood, that these crops are to serve through all the winter; and, therefore, it will be found that glass will be of essential service, as the weather grows cold; and not only glass, but a covering of mats also will be necessary, during the night, in severe weather. One thing, however, must be attended to in the use of glass; namely, to be careful to give sufficient air at all times to keep the plants from getting drawn.

Abercrombie is, in my opinion, deficient upon the culture of this esculent for the purpose of having it young all the year round; and I much question if his method will answer fully in the most favorable situations, as to soil and climate, that Britain will afford. I remain, sir, yours, &c.

T. Rutger.

Shortgrove, Essex, Dec. 1833.

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* The following fact evinces the capacity of broccoli for forming sprouts:—"Two dozen of broccoli, a dozen of which were very fine and fit for table, were, within the last few days, cut from one stem, grown in the garden of Mr. Lewis, nurseryman, of Chelmsford" See also a notice of a broccoli plant which had stood six years, and produced good heads from sprouts every year, Gardener's Magazine, vol. VI. page 492.—J. D.

THE BREEDER & MANAGER.

Bakewell Sheep—Mutton.

The following letter of our friend John Barney, Esq., of Philadelphia, will not fail to attract the attention of farmers. His flock of sheep is at this season worth going a hundred miles to see. We had recently the pleasure of a visit with Mr. B. at his (Girard) farm, near Philadelphia, and also at that in Delaware, where his sheep are kept, and though we had seen them in the fall season, we were completely surprised at their appearance lately. All were in the most perfect health and fine condition—each of the ewes with her young charge, all vigorous and lively. And such fleeces—One can with difficulty believe the covering is natural to them—scarcely a foot to be seen—certainly less of the *ancle* is visible than of a modern *belle's* in a fashionable promenade. Indeed the animals appear as if their neat, white and beautifully turned heads were projecting from a bale of wool. We did not indeed taste the mutton of any of friend Barney's flock, but we will just tell *part* of what we did taste, and that was a slice or two of the best ham we ever put knife into. Whoever wants this article in the greatest possible perfection, let him apply to John Barney, Esq. Let Barnum, Beltzhoover, Newcomb, Hussey, Elder, and all others *who live by eating*, take a hint.

Girard Farm,
March 20, 1834.

To the Editor of the Farmer & Gardener:

Dear Sir,—Your letter dated 14th instant, also one of 29th ultimo, respecting cattle, sheep, pigs, &c. were duly received. My reason for not answering them sooner, I wished to inform you the result of my sale of sheep of the Bakewell breed, 13 wethers and 5 ewes. I sold them to a Philadelphia butcher for 12½ cents per pound. They were slaughtered on Thursday last, and were in market on Saturday, 15th inst. The 13 wethers, one year old past, weighed as follows, viz: 145, 136, 103, 104, 105, 106½, 125, 114½, 106, 112½, 114, 116, 103, total 1,490½ pounds. The ewes

weighed 134, 105, 126, 119½, 96½—total 581 pounds. Grand total weight of the 18 sheep, 2,071½—rough fat 248 lbs. When it is considered that the wethers were but one *shear*, that is to say yearlings, they far exceed all in weight, fatness and quality I have ever raised or ever seen, in this or any other country. They were allowed by all the butchers that saw them to be without exception the best ever slaughtered in Philadelphia. Two fore quarters were sent to your city, and one whole sheep to Liverpool, England. What farmer will say that sheep are not a profitable stock, when yearlings can by judicious management be brought to this perfection? Allowing each sheep to weigh 115 lbs. at 12½ cents, this is $14.37½, one fleece of wool, 8 lbs. at 40 cents, is $3 20—total amount for each sheep, $17 57½. You are at liberty to comment on the above, and give, if you think it *would merit*, a place in your useful paper. JOHN BARNEY.

IMPORTANT TO LIVE STOCK BREEDERS.—A medical friend has put into our hands a London Medical Periodical, from which we shall extract and publish entire, the course of lectures mentioned below. The following are the remarks of the London editor on commencing the publication, which show the very high estimation in which the lectures were held by a first rate judge of the subject.

LECTURES ON VETERINARY MEDICINE.

Delivered by Professor Youatt in the University of London.

We feel much satisfaction in announcing, that we have just concluded arrangements for publishing the whole of this important, and, we may add, *unique*, course of lectures. The number will reach to between eighty and one hundred, and the proof pages of the entire course will be carefully revised by the *Professor* himself, so that the most effectual protection will be afforded against the commission of errors which might find a place in the manuscript of purely medical reporters, to whom many of the subjects discussed by him must prove matter of novelty. The lectures will embrace the anatomy, (practical) physiology, pathology, and treatment of the diseases, of *horses*, *horned-cattle*, *sheep*, *swine* and *dogs;* and when it is considered that the happiness, the welfare, and the very existence of man, depend in a great measure upon the successful rearing and preservation of these important animals, need we point out the value of such a course of lectures when delivered by such a practitioner as Professor *Youatt*, who, in his "*Essays on the Horse*," published by "The Society for the Diffusion of Useful Knowledge," has proved that he possesses every requisite for the competent performance of such a great task? One or two of the lectures will be published in *The Lancet* of next week, and the rest will be regularly continued until the completion of the course, which will end with the conclusion of the next volume. Thus the whole of the lectures, even should they amount to a hundred in number, will be printed in two volumes of *The Lancet*, closing on the 25th of September next.

In strongly recommending these lectures to the nobility, veterinary surgeons, farmers, and others, the members of the medical profession will confer an essential service upon their friends and patients; for how often does it happen that, from a want of knowledge in the treatment of the diseases of animals, a gentleman finds his comfort materially lessened, and the farmer incurs the loss of a large portion of his property! The force of this statement cannot be better illustrated than by mentioning the fact, related by Professor *Youatt*, that no less than *two millions* of sheep were sacrificed to the disease called the "*rot*," in England alone, during the last year. Besides, when gentlemen are made aware of the skill and attention required in the management of the diseases of animals, they will be taught how to appreciate the learning and knowledge which enable medical practitioners to cure the most complicated diseases that afflict human beings.

That our readers may form an idea of the subjects treated by the professor, we annex a copy of the index to the Lectures as far as yet received, which is to the 43d lecture only.

Introductory lecture to a course of medicine; division of the subject; preliminary remarks on the brain, the nerves, and circulation of the blood; respiration, and the importance of its influence over the animal economy; structure of the nasal cavity of the horse.

Lecture 2—Nasal cavity of the ox, sheep, swine, and dog; fracture of the nasal bones of the horse, its cause, effects, treatment, and prognosis; with cases.

Lecture 3—The superior and anterior maxillary bones of brute animals; the palatine bones and the vomer; the septum and æthmoid bones; the turbinated bones; the meatus, the maxillary, and other sinuses, and the lachrymal ducts; fistula lachrymalis.

Lecture 4—The nostrils and their muscles; difference of the nostrils in horses; the membranes generally, and the Schneiderian membrane in particular.

Lecture 5—The veins and nerves of the nose in the horse, &c.; spontaneous bleeding from the nose in the horse and ox; the sense of smelling.

Lecture 6—Polypi in the nose of the horse, ox, and dog, and its removal by operation; coryza and nasal gleet in the horse.

Lecture 7—Glanders, its symptoms and post-mortem appearances; its division into acute and chronic; greater frequency with which the left nostril is affected; progress of the disease from glanders to farcy; diseases often mistaken for glanders; affection of the lungs in glanders.

Lecture 8—First seat of glanders; general view of the disease, its causes, &c.; absurd and cruel system of English stabling, and its fatal effects.

Lecture 9—Causes of glanders continued; want of proper exercise; liability of the horse to this disease; on glanders running in the stock; its production by damp air; effect of age on the disease; is glanders contagious? proofs; its mode of communication; varying period of its appearance; duty of veterinary surgeons; does glanders ever occur in man? precautions in case of glandered horses.

Lecture 10—The treatment of glanders; supposed cases of; effect of pure atmosphere and turning out; local applications to the disease; counter irritants; sulphates of copper and iron; tricks of horse-dealers.

Lecture 11.—Farcy; disease of the absorbents; connexion of farcy with glanders; diseases resembling farcy; is farcy contagious? its local and constitutional treatment; apparent cures; recurrence of the disease.

Lecture 12—Ozena in the horse, its treatment, and distinction from other diseases; worms in the horse's nose; coryza in cattle, and its treatment; glanders and farcy in cattle; coryza in sheep, and its treatment.

Lecture 13—Coryza and ozena in dogs; worms in the dog's nose; distemper, its contagiousness; varieties, symptoms, progress, and treatment; distinction between distemper and rabies.

Lecture 14—Distemper in the dog continued.

Lecture 15—Nasal catarrh in the cat, rabbit, and poultry; the velum palati; the os hyoides of the horse, ox, dog, and swine.

Lecture 16—Strangles in the horse and ox; swellings under the throat in dogs.

Lecture 17. Anatomy of the larynx in the horse, ox, dog, and swine.

Lecture 18—The larynx continued.

Lecture 19—The thyroid glands and trachea.

Lecture 20—The respiratory canal; suffocation from disease; mode of performing tracheotomy in the horse; employment of respiratory tubes; tracheotomy in cattle and dogs; the thymus gland, its anatomy, functions and physiology; the bronchial tubes.

Lecture 21—The thorax of the horse; the ribs, sternum, and intercostal muscles; proper form of the thorax; evils of tight girthing.

Lecture 22—Anatomy of the diaphragm; spasms of the diaphragm; opening through that muscle; arteries, veins, and nerves of the diaphragm; Sir Charles Bell's Experiments; mechanism of respiration; inflammation and rupture of the diaphragm.

Lecture 23—Serous membranes; the pleura and its surface; the surface of serous membranes, and the fluid exhaled by them; characters of serous membranes; the pleura and its purposes; opposite effects of purging in pneumonia and pleurisy in the horse; connexions of the pleura and the mediastinum.

Lecture 24—On the structure of the lungs; the pulmonary capillary circulation; the change effected in the blood; catarrh in the horse, ox, and dog; chronic cough.

Lecture 25—On laryngitis; tracheitis; roaring, its causes, and treatment.

Lecture 26—On epidemic catarrh in horses; the malignant epidemic.

Lecture 27—Ditto in cattle; bronchitis in horses and cattle; on worms in the bronchiæ of animals.

Lecture 28—Inflammation of the lungs in horses, cattle, swine, and dogs—symptoms, causes, and treatment—value of auscultation.

Lecture 29—Pleurisy in horses; operation of paracentesis pleurisy in cattle; in dogs; curious case.

Lecture 30—Phthisis pulmonalis in the horse and cattle; causes, treatment, post-mortem appearances; Swiss cattle.

Lecture 31—Chest affections; thick-wind; diagnosis by auscultation; broken-wind, causes, progress, and treatment.

Lecture 32—The head of the horse—its anatomy, physiology, and phrenology.

Lecture 33—The frontal bones and horns of horses and cattle; distinction of breeds, age, and sex, by the horn; the fly in the frontal sinuses of sheep.

Lecture 34—The frontal bones and antlers of deer; frontal bones of swine and dogs; parietal, temporal, occipital, sphenoid, and ethmoid bones; the cranial cavity.

Lecture 35—The brain in brutes; functions of the cineritious and medullary portions; intellectual principle in animals.

Lecture 36—On the brains of domesticated animals; chemical composition of the brain; difference of size; description of its various parts.

Lecture 37—Structure and functions of the cerebrum and cerebellum; experiments of Fleurens; spinal chord, and cerebral nerves.

Lecture 38—Sketch of the nervous system; nerves of peculiar sensation; nerves of pure motion.

Lecture 39—Double origin and function of the fifth pair; structure of the spinal marrow, and double root of the spinal nerves; experiments of Bell and Mayo.

Lecture 40—Membranes of the spinal marrow; origins and distributions of the spinal nerves.

Lecture 41—Ninth and tenth pair of nerves, their origin, course, and functions.

Lecture 42—Nerves connected with the stomach; the cerebro-visceral nerve; experiments demonstrating its influence in digestion.

Lecture 43—The seventh pair of nerves, the sympathetic, or great organic nerve; universal influence of it over the functions of nutrition, secretion, &c.; conclusion of the nervous system.

Observations on the lectures.

Cure for a Film *in the eye of a Horse or an Ox.*—Edward S. Jarvis, esq. of Surrey, Me. in a letter to Mr. Joseph R. Newell, proprietor of the Boston Agricultural Warehouse, states as follows:

Have you ever heard of a cure for a film on the eye of a horse or an ox? I was told of one eighteen or twenty years ago, and have been in practice of it ever since with perfect success.

It was brought to my mind by just having a proof of its successful application in a calf that had its eye hurt by a blow from another creature. A film formed over it, and it was thought its eye was lost. But by turning into the opposite ear a great spoonful of hog's fat, it was cured in 24 hours. I do not pretend to account for this, but I have seen it tried with success so often, that I think it ought to be made public, if it has not been before. I learned it of an Indian.

Great Family.—At Rhihwald, in Switzerland, the postmaster and landamman of the district, is a fine man of about fifty, who is nearly seven feet high. His wife is above six feet; and of seven or eight children, sons and daughters, the former are all above six feet six, and the girls above six feet.

Cream of Tartar, rubbed upon soiled white kid gloves, cleanses them very much.

MISCELLANEOUS.

From the American Turf Register & Sporting Magazine.

On the Wild Horses of the far South-west.

[The letter addressed to Gen. Gratiot, by the Editor of this Magazine, with a view to procure a good specimen stallion of the race of wild horses, from the prairies south-west of Fort Gibson, has attracted the notice of amateurs and public spirited officers of the army, and will, we have no doubt, lead to the attainment of the object contemplated—affording an opportunity of fair experiment, that we doubt not will result in decided improvement of our stock of cattle for the road and for coaches.

Major Mason, a host in himself, is preparing, with "malice prepense," to "choke down" one of the stoutest of the herds that roam in unbridled freedom on those boundless plains: and if he succeed, is determined to force the bit into his reluctant jaws, and "to mount him on the spot." And through the public spirit of Col. H. C. Brish, of Ohio,—the agent for settling the Seneca Indians on the Neosho or Grand River—we hope to procure a beautiful mare, white as the driven snow, with flowing mane and flashing eye, and tail sweeping the ground. She was taken by Col. Choteau, and is considered one of the most perfect of the wild race. We shall say more of her when we get her. From Col. Brish, who had ample opportunities of judging, we have the following sketch and opinion of the horses in question.]

It is a fact generally known, that the wild horses range in immense herds south-west of Cantonment Gibson, and of course a proportion of them are of the *male* kind; and with them it is truly the fact that "might gives right," for the stallions are the most powerful of the herd. *Colts* of the *male* kind begin their trials for "life and death" about the time of first feeling nature's prompting; and such only as possess strength and action to resist or avoid the attacks of the reigning sovereigns survive that crisis; and those, on reaching to the fulness of their strength, retaliate upon their *then* aged and infirm rulers, and trample them into dust, and thus become the rulers of the herd, and have "their day," and in their turn share the same fate. In this way, sir, where hundreds of these powerful animals are crossing and mingling their blood through each other, their offspring will be of their kind, as certainly as the stream will exhibit the properties of the fountain.

I have been a dragoon, and love a horse and sword—I have owned the finest of blooded horses—I have lived five years amongst Indians, and have hunted with them over woodland and prairie; but have never met with any thing of the horse kind that possessed, strength, action, and wind equal to the "mustang" horses, (as they are called by the Spaniards,) or any that could endure fatigue and hunger equal to them, or subsist upon as little, and retain their strength.

Were Major Mason's dragoons mounted upon such horses, he might strike a blow that would be felt; but upon even our best blood, where they subsist entirely upon grass, and in hard service, he will soon find them jaded and weak; and he might as well pursue so many devils, mounted on salamanders, as the Pawnees or Camanchas upon mustang or wild horses.

I wish the Major success: he possesses no doubt a "stout heart," and will render his country a greater service by catching you a fine horse, than if he were to kill a thousand of the above named Indians.

I am decidedly of opinion, that these horses are superior to any others *on the face of the earth for cavalry purposes.* You are disposed to do justice to their noble natures. They should be kept only as "war horses:" as such they are used by the proud Osage and Pawnee braves. It would be a pity to chain such noble spirits to the chariot of the proudest grandee or nabob; although, even in that capacity, their equal could not, in my opinion, be found.

I am, with much esteem, you ob't serv't,

Henry C. Brish.

Labor is Honorable.—The following paragraph, extracted from the message of Governor Davis to the legislature of Massachusetts, is highly creditable to its author:

"While we continue to respect labor—while we look upon it, as it is, the great element that imparts to our country a growth which errors in public policy can scarcely check, and to our institutions their overpowering strength; while we hold it to be meritorious and honorable, instead of servile; while we cling to the purity and simplicity of life, which belongs to this condition, instead of degenerating into the follies, the vanity and false hopes which overgrown wealth often begets; while we pursue a policy that will give to this labor the most ample scope and encouragement in all its various occupations, we shall have little occasion to entertain apprehension for our free institutions, if we also continue to provide liberally for the culture and improvement of the mind."

In our last paper we published a receipt for the Rheumatism, which was simply this:—"Take a strip of gum elastic, and tie it round the joints affected." This would not endanger life, and was well worthy the experiment. So we say. It was tried upon a gentleman of this place, who had resorted to almost every other remedy, and to his surprise had the desired effect. In fact he was so much reduced by this disease as to lose the use of his limbs, and in making the experiment, he has not only been relieved of the pain and weakness so incident to its nature, but is finally gaining and enjoying nearly the wonted strength of his system. We recommend the remedy.—*Lebanon Gazette.*

CONTENTS OF THIS NUMBER.

Terms and Introductory Remarks—A friendly suggestion concerning Subscriptions—Exchanges, Payments, &c.—On the Improvement of Lands in the Central Region of Virginia—Ohio Tobacco Crop—A Chapter on Gardening—On growing large Gooseberries for Exhibition—On Propagating the Purple Broccoli from Slips—On the mode of securing a supply of Young Carrots throughout the year—Bakewell Sheep and Mutton—Lectures on Veterinary Medicine—Cure for a Film in the Eye of an Animal—Great Family—Way to clean White Kid Gloves—On the Wild Horses of the far South-west—Gov. Davis' opinion of Labor—India Rubber a cure for Rheumatism—Prices Current and Advertisements.

Baltimore Produce Market.

☞ *These Prices are carefully corrected every* WEDNESDAY.

	PER.	PROM	TO
BEANS, white field,	bushel.	$1 50	$1 62
BEEF, on the hoof,	100lbs.	6 00	6 75
CORN, yellow,	bushel.	56	——
White,	"	54	——
CORN MEAL, yellow, kiln dried,	hhds.	——	14 00
do. do.	barrel.	——	3 00
COTTON, Virginia,	pound.	10	12
North Carolina,	"	11	12½
Upland,	"	11	13
CHOP RYE, pure	100lbs	1 44	1 50
FEATHERS,	pound.	37	——
FLAXSEED,	bushel.	1 25	——
FLOUR—			
Best *Patapsco* white wheat family,	barrel.	6 50	7 00
Do. do. baker's	"	6 00	6 50
Do. do. Superfine,	"	5 50	6 00
Super Howard street,	"	4 87	5 00
" " wagon price,	"	4 75	——
City Mills, extra,	"	5 12	5 25
Do.	"	4 75	4 87
Susquehanna,	"	5 00	——
Rye,	"	3 37	3 50
GRASS SEEDS, red Clover,	bushel.	3 50	4 00
Timothy (herds of nh	"	2 50	——
Orchard,	"	3 50	——
Tall meadow Oat,	"	2 50	——
Herds, or red top,	"	1 25	——
Lucerne,	pound.	37	——
White Clover,	"	37	——
HAY, in bulk,	ton.	16 00	18 00
Pressed,	100 lbs	——	1 00
HEMP, country, dew rotted,	pound.	6	7
" water rotted,	"	7	8
LIME,	bushel.	30	35
OATS,	"	30	32
OIL, linseed,	gallon.	85	——
PEAS, red eye,	bushel.	80	——
Black eye,	"	85	90
Lady,	"	95	1 00
PLASTER PARIS, in the stone,	ton.	3 25	——
Ground,	barrel.	1 37	——
RAGS,	pound.	3	4
RYE,	bushel.	60	62
TOBACCO, crop, common,	100 lbs	3 50	5 00
" brown and red,	"	4 50	6 00
" fine red,	"	6 00	8 00
" wrappery, suitable for segars,	"	6 00	12 00
" yellow and red,	"	8 00	12 00
" yellow,	"	13 00	17 00
" fine yellow,	"	15 00	22 00
Seconds, as in quality,	"	4 00	5 00
" ground leaf,	"	5 00	9 00
Virginia,	"	4 00	——
Rappahannock,	"	3 00	4 00
Kentucky,	"	4 00	8 00
WHEAT, white,	bushel.	1 20	1 23
Red,	"	1 00	1 06
WHISKEY, 1st pf. in bbls	gallon.	23	24
" in hhds. wagon price	"	21	——
WAGON FREIGHTS, to Pittsburgh,	100 lbs	1 37	——
To Wheeling,	"	1 50	——
		washed.	*unwash*
WOOL, Prime & Saxon Fleeces,	pound.	55 *to* 65	24 *to* 28
Full Merino,	"	45 55	22 24
Three fourths Merino,	"	37 45	20 22
One half do.	"	30 37	18 20
Common & one fourth Meri.	"	25 30	18 20
Pulled,	"	28 32	16 20

Wool.—The prices of Wool may be considered at this time as merely nominal; the state of the money market is such that sales cannot be as readily effected as a few months since. There will no doubt be a more active demand for the article as soon as the new clip comes to market, and the manufacturers have used their present stock.

WANTED,

BUCKWHEAT FOR SEED, by

I. I. HITCHCOCK,

May 9. American Farmer Establishment.

Baltimore Provision Market.

	PER.	FROM.	TO.
APPLES,	barrel.	$——	$——
BACON, hams,	pound.	10	——
Shoulders,	"	7	8
Middlings,	"	7	8
BUTTER, printed, in lbs. & half lbs.	"	25	44
Roll,	"	16	25
CIDER,	barrel.	3 50	5 00
CALVES, three to six weeks old	each.	4 00	6 00
COWS, new milch,	"	17 00	40 00
Dry,	"	9 00	12 00
CORN MEAL, for family use,	100lbs.	1 37½	——
EGGS,	dozen.	10	——
FISH, Shad, fresh,	100	11 00	——
" salted,	barrel.	6 25	6 50
Herrings, salted, No. 1 & 2,	"	3 25	3 75
Mackerel, No. 1, 2 & 3,	"	4 75	6 00
Cod, salted,	pound.	3½	——
LAMBS, alive,	each.	1 25	2 00
Slaughtered,	quart'r	37½	75
LARD,	pound.	8	——
POULTRY, Fowls,	dozen.	3 00	3 50
Chickens,	"	2 00	2 50
Ducks,	"	3 50	——
POTATOES, Irish,	bushel.	88	1 00
Sweet,	"	75	1 00
VEAL, fore quarters,	quart'r	50	75
Hind do.	"	75	1 00

ADVERTISEMENTS.

IMPROVED SHORT HORNS.

MR. POWEL having left his farm, offers for private sale, his stock of improved short horned CATTLE, all of which have either been imported by him, or bred on his farm from animals selected for him in England.

Direct to WILLIAM COUCHES,
Care of John Hare Powel, Esq.

Powelton, April 17th, 1834.—May 9 9t

TURNING AND MILL SMITHING.

THE subscriber respectfully informs his friends and the public generally, that he has opened a Turning and Smith Shop adjoining Mr. William Miller's Foundry on the east side of Jones' Falls, opposite the Fish Market, where he is prepared to execute all kinds of Turning and Smith-work, and to fit up Rail Road work, Tobacco Presses, and Mill work generally. Also Stage and Coach Axles made or turned to order. All orders thankfully received and promptly attended to.

May 9. GEO. W. GWINN.

DUTTON CORN.

THE subscriber has procured a small quantity of this celebrated variety of Corn. The following is the description of it, by Judge Buel, of Albany, N. Y.

"*In making a choice of sorts*, the object should be to obtain the varieties which ripen early, and afford the greatest crop. I think these two properties are best combined in a twelve rowed kind which I obtained from Vermont some years ago, which I call Dutton corn, from the name of the gentleman from whom I received it. It is earlier than the common eight-rowed yellow, or any other field variety I have seen, and at the same time gives the greatest product. I have invariably cut the crop in the first fourteen days of September, and once in the last week in August. The cob is large, but the grain is so compact upon it, that two bushels of sound ears have yielded five pecks of shelled grain, weighing 62 lbs. the bushel."—[*American Farmer, vol.* 15, *page* 43.

I. I. HITCHCOCK,
May 9. American Farmer Establishment.

A JACK FOR SALE.

I HAVE the selling of a fine JACK, nine years old, whose mules are excellent. He was imported from Gibraltar four or five years ago, and is now offered for sale for want of use by his present owner.

He is upwards of 12½ hands high, stout and well made. Price $250. Enquire of I. I. HITCHCOCK,
May 9. American Farmer Establishment.

[GENERAL ADVERTISEMENT.]

SEEDS, TREES, PLANTS, DOMESTIC ANIMALS, IMPLEMENTS, BOOKS, &c. &c.

FOR SALE AT THE

AMERICAN FARMER ESTABLISHMENT,

No. 16, *S. Calvert-street, Baltimore, Md.*

The subscriber presents his respects to farmers, gardeners, and dealers in Seeds throughout the United States, particularly his customers, and informs them that he has received from Europe, from his own Seed Garden, and from various parts of this country, his annual supply of FIELD AND GARDEN SEEDS; and that he is prepared to execute orders, wholesale and retail, with promptness and accuracy, at as low prices, and on as favorable terms as can be afforded by any dealer in the United States, *for first rate articles.*

FRUIT and ornamental trees and plants, grapevines, shrubbery, gooseberry, raspberry, currant, and strawberry plants, bulbous and other flower roots, will at the proper seasons, be procured to order, from the best sources, including all the principal nurseries and gardens in this country, for most of which the subscriber is agent; also,

PLOUGHS, harrows, cultivators, straw cutters, wheat fans, corn-shellers, threshing machines, and all other kinds of agricultural and horticultural implements, will be procured from the best manfactories in Baltimore, at the manufacturers' prices.

DOMESTIC ANIMALS, particularly cattle of the improved Durham Shorthorn, the Devon, and the Holstein breeds; Sheep of the Bakewell, Southdown, and various fine wooled breeds; Swine of several valuable kinds, especially of the Barnitz breed; Dogs of several varieties, for the farmer and sportsman; various kinds of Poultry, such as white turkies, Bremen and Westphalia geese, game and other fowls, and several other species of animals, *all* of choice breeds, (*and no others,*) are either kept for sale at the experimental and breeding farm of this establishment, or can be procured from the best sources, to order.

BOOKS, agricultural, horticultural, and botanical, in much greater variety than at the bookstores; some of them rare and particularly valuable, are kept constantly for sale.

In short, *all articles* wanted by farmers and gardeners in the prosecution of their business, are intended either to be kept on hand, or procured when ordered, for a small commission.

☞And though last in order here, yet FIRST IN IMPORTANCE to every tiller of the soil and keeper of Domestic Animals, the subscriber offers to them THE SEEDS OF KNOWLEDGE in their vocations, "fresh and genuine," having been carefully gathered from the field of Experience, and the garden of science—the whole done up in *papers*, and labelled "THE FARMER AND GARDENER, AND LIVE STOCK BREEDER & MANAGER; and dispensed from the *printing press* of this establishment every Friday in the form of a weekly Agricultural Paper, at $5 a year, payable in advance.

N. B. This periodical is essentially similar to the late AMERICAN FARMER, the publication of which has been for some time past suspended. Address

I. IRVINE HITCHCOCK,
American Farmer Establishment.

Note.—An "Extra" number of the Farmer, containing a Prospectus of the Establishment, and a catalogue of Seeds, and other articles for sale, will be sent gratis to any person who shall furnish his address, *post paid*, for that purpose. May 9.

WOOL.

LYMAN REED & CO. Commission Merchants, No. 6 S. Charles street, Baltimore, Md.—devote particular attention to the sale of WOOL. All consignments made them will receive their particular attention, and liberal advances will be made when required. May 9.

POINTERS.

FOR SALE, several Pointer Puppies, littered 22d Nov.; they are of the very best blood, and are all most beautifully formed, and marked, being white with liver spots.

Price $10 each. Apply to I. I. HITCHCOCK.

Printed by SANDS & NEILSON, S. E. corner of Market and Calvert-streets.

THE FARMER & GARDENER;

AND LIVE-STOCK BREEDER & MANAGER.

CONDUCTED BY I. IRVINE HITCHCOCK, AND ISSUED EVERY FRIDAY FROM THE AMERICAN FARMER ESTABLISHMENT, AT $5 PER ANNUM, IN ADVANCE.

No. 2. **BALTIMORE, MAY 16, 1834.** **Vol. I.**

☞This publication is the *successor* of the late **AMERICAN FARMER,** (which is discontinued,) and is published at the same office, at five dollars per year, payable in advance.—☞When this is done, 50 cents worth of any kind of seeds on hand will be delivered or sent to the order of the subscriber with his receipt.

American Farmer Establishment.

BALTIMORE: FRIDAY, MAY 16, 1834.

HORTICULTURAL SOCIETY OF MARYLAND.—The second grand exhibition of this excellent and spirited Society, was opened on Wednesday morning last, and will close this evening. In our next we shall endeavor to give our readers some idea of this magnificent display of the productions of the garden and greenhouse. Though highly creditable to the association, it is by no means equal to what it would have been, but for the late frosts which seem to have been very detrimental to early gardners vegetables.

GAMA GRASS SEED.—We have at length procured several small parcels of this seed from different gentlemen at the south. We thank them for the care they have taken to supply us, and shall be glad to procure and pay liberally for additional parcels. We propose to reserve a portion of this precious article exclusively for our subscribers, and to send to each who may desire it, a small quantity *with his receipt for five dollars paid for subscription to this paper.* Who will have a little of it? We could sell it at a high price, but prefer *to give it away with receipts* to any other mode of disposing of it.

CATTLE.—We call attention to the advertisement of Col. Powel's stock of short horned Cattle now offered for sale. We had the pleasure a few days ago of viewing these beautiful animals, and can bear witness to those fine qualities in them which are apparent at first sight, viz. their fine forms, size, and general healthy condition, and we doubt not that they possess equal excellency in other respects.

SKINLESS OATS.—Can any gentleman furnish the editor of this paper with any quantity of the seed of this valuable grain? If so he will confer an important favor, and probably pave the way for its more general introduction into this country.

GAMA GRASS SEED.

SAVANNAH, April 2d, 1834.

To the Editor of the Farmer and Gardener.

In one of your late Farmers, I noticed an offer of five dollars for one quart of the seed of the Gama Grass. Mentioning this to a friend, (one of your oldest and constant subscribers) he immediately offered to furuish the quantity, provided I would forward it to you, *not for the reward*, but with a hope of conferring a benefit; you will find a small box containing the seed, and directed to you on board the schooner Aerial, Capt. McNamara, and bound to Baltimore. It is desired to have it distributed as follows: to the gentleman who made the offer, one half; the other half as you may judge best, charging them when they collect seed, to distribute it to those that may want it on like terms, this done, my friend will be paid for his seed and I for my trouble. Wishing it a safe arrival and rapid growth,

I am respectfully yours,

WM. STARR.

We thank both of our friends for this very acceptable *deposite* for the benefit of farmers. We have handed one half of the seed to the gentleman who advertised for a quart, and the balance is at the disposal of those gentlemen who may desire to try the Gama grass. Several letters that we have recently received, concur in stating that the proper situation for the Gama grass is high dry land, which if poor must be well manured. But most persons will prefer planting the seed in their gardens, and afterwards transplanting the roots to a proper situation to spread and flourish. In that case the seed should be planted in drills 18 or 24 inches apart, and the seed 6 inches apart in the drills. The fall is the *best* season for planting it, but those who prefer to try it now, would better soften the hard shell of the seed, by soaking it in warm water for a few hours before committing it to the earth.

SCOTCH LEEK.—Capt. Matthews, of the Eastern Shore of Maryland, presented us some weeks ago, with a very fine Scotch Leek from his garden. He informs us that he has two that measure at the surface of the ground—one 9½, and the other 9 inches in circumference. They are kept, as they ought to be, for seed. Beat this who can.

Since writing the above, Capt. Matthews has brought to our office a stalk of *Tart Rhubarb*, which measures five feet four inches in height Such specimens as these of garden vegetables, are silent but eloquent witnesses of the skill and care of their worthy cultivator.

SPLENDID CAULIFLOWER.—At a meeting of the committee of management of the Maryland Horticultural Society, on Thursday the 8th inst. a Cauliflower was exhibited by Mr. Thos. Dixon, Gardener to Mrs. Donnell, of Willenbrook, which measured 2 feet 11 inches in circumference. It was remarkably compact and firm, and in the highest degree of perfection. It was considered by all the members, the finest ever exhibited in Baltimore, and several gentlemen who had been familiar with this delicious vegetable in Europe, said it would have been considered a first rate one in Holland.

We are requested to urge upon our Gardeners, and particularly upon the owners of private gardens, to send specimens of their garden vegetables to the exhibitions every Saturday morning throughout the year, at the Horticultural rooms in the Patapsco Building, opposite the Maryland Savings Institution, in North, (formerly Belvidere) street. Any thing of the vegetable kind, fruit or flowers, will be received and regularly inspected by the committee appointed for this object; and premiums awarded to the most excellent, with impartiality.

A prosecution was some time since instituted by the proprietors of the New York Daily Sentinel against a subscriber for the amount of his subscription to that paper. He pleaded that he had not ordered the paper, that it was sent him without his requesting it. The plaintiff however recovered the amount claimed; for it was decided that persons *receiving* a newspaper, without ordering it to be discontinued, are liable in every instance for the price of subscription.

AMERICAN SILK.—Power looms and other machinery for the manufacture of silk into cloth, have been introduced into Lisbon, Connecticut, and specimens of the manufactures, reeled, spun, woven and dyed in that town, have been exhibited in New York. The New York evening post says "they are among the most substantial silk fabrics we have ever seen, resembling *Gros de Naples* and preserving a beautiful lustre."

If you would have a good servant, take neither a kinsman nor a friend.

THE FARMER.

From a British Treatise "on the Science of Agriculture."

ON THE COMPOSITION OF SOILS, AND THE AGENCY OF THE EARTHS IN VEGETATION.

The surface of the earth is a variable compound, but as it respects vegetation, it is not necessary to pursue its analysis beyond the following simple divisions, viz: calx, or the calcareous; silex, or the siliceous; clay, or the argillaceous; magnesia, or the magnesion; and carbon, or the carbonaceous, or, as this is commonly called, mould.

The first four substances, are what Miller properly calls the containing part, or body, bed, or couch; and the fifth substance or mould, (which is the result of decayed animal and vegetable matter,) the part contained.

It is clearly proved that neither of the four substances, calx, clay, magnesia, or silex, in a simple state, whether separate or combined, will support a plant; and that the vegetative power of every part of earth, is determined by the quantity of mould, or animal and vegetable matter it contains.

On the earths, as forming a component part of plants, Mr. Kirwan says, "The next most important ingredient to the nourishment of plants, is earth: and of the different earths, the calcareous seems the most necessary, as it is contained in rain water; and absolutely speaking, many plants may grow without imbibing any other; M. Ruckert is persuaded that earth and water in proper portions, forms the sole nutriment of plants: but M. Giobert has clearly shown the contrary, for having mixed pure earth of alum, silex, calcareous earth, and magnesia, in various proportions, and moistened them with water, he found that no grain would grow in them; but when moistened with water from a dung-hill, corn grew in them prosperously; hence the necessity of the carbonaceous principle is apparent."

He also says, "Earths cannot enter into plants, but in a state of solution; or at least only when suspended with water in a state of division, as minute as if they really had been dissolved; that siliceous earths may be suspended in such a state of division, appears from various experiments, particularly those of Bergman, who found it thus diffused in the purest waters of Upsal; and it is equally certain that it enters copiously into vegetables: both his experiments, especially those of Macci, establish this point beyond contradiction. Argillaceous earth may also be finely diffused, so as to pass through the best of filtres; so may also calx, as appears from the quantity Margraaf found in the purest rain water."

On this part of the subject, after reciting a great number of experiments, Sir Humphry Davy observes, "The general results of this experiment, are very much opposed to the idea of the composition of the earths by plants, from any of the elements found in the atmosphere or the water."

He also says, "As the evidence on the subject now stands, it seems fair to conclude, that the different earths and saline substances, found in the organs of plants, are supplied by the soils in which they grow, and in no cases composed by new arrangements of the elements in air or water."

Here again is a great difference in the opinion of those great chemists, and on a most important point; it being admitted that earths are a necessary ingredient in the composition of plants, the question naturally arises, how, and in what proportions, and in what state, is it required by vegetables? If Sir Humphry Davy's conclusions are just, a minute examination or analysis of soils, would be requisite to form a correct judgment of its capacity; and to these lengths he has gone, and given the ingredients and proportions of several fertile soils; he has also described the method of analyzing soils; but the quantity of earth required by plants, for their various compounds, is so small, as beyond all doubt to sustain Mr. Kirwan's opinion, that it is supplied by water.

That the clearest spring water contains a quantity of earth, every person may obtain ocular demonstration of, by examining the inside of a tea kettle, in which water has been boiled for some time; the earth that will be found adhering to it, must have been deposited from water.

Thus then, as far as the earths are concerned as an article of consumption, or a necessary component in the food of plants, we may rest satisfied with the natural composition of most soils, and direct our attention only to its constitution, as it influences the absorption, retention, and distribution of water; and to its chemical powers, in regulating and determining the extent and effect of the different fermentations, combinations, and decompositions, which are requisite for the reduction and preparation of the various substances which constitute the food of plants.

If the earth was left solely to the action of the natural and chemical principles of affinity, attraction, repulsion, &c. the accumulation, or concentration, of the separate primitive substances; or of vegetable and animal matter or mould; may be too great to raise and sustain plants in a healthy and fruitful state, and such may be the case with other bodies, either simple or combined; we therefore find that nature has provided the means of averting those extremes, by reducing and blending, or mixing them, and this by the operation of insects and reptiles; as has been before observed, the earth worms seem peculiarly formed for this purpose; by their means the different substrata of clay, calx, sand, &c. are covered with a stratum compounded of the finely divided matter of its composition, forming what is called loam, or the soil; these little creatures, in making their passages or inroads, have no other means of clearing their way, than by eating the opposing matter, carrying it to the surface, and there throwing it up: hence we find, that every part of the globe that supports vegetables, is furnished or covered with an admixture of the different earths, forming the soil, of greater or less depth; and the depth of this stratum or covering, the degree of concentration, and proportion of the different substances, the nature of the substrata, as it regards the percolation and retention of water; the quantity of water supplied; and the exposure to the sun, air, and light, determine the natural produce of the general substance or soil.

From what is here said, so far from earth worms being an enemy to the farmer, they are his best friends; without them his lands would soon become impenetrable to air or water, and hence sterile and unproductive; and it is certain earth worms never wound, or prey upon the sound or living parts of seeds, roots, or plants.

As Mr. Kirwan observes, the calcerous earths seem to be the most necessary as a component part of the food of plants; from its peculiar chemical powers, it is also most necessary as an operative agent in the preparation and reduction of animal and vegetable substances, and in due proportion, it is also well adapted to render the other more tenacious substances permeable to water and air, all which have been before explained.

But that state, in which the operation of the calcareous earths have been found to be the most powerful, is lime. This singular substance is never found in a native state; but from the simplicity of its formation, and very extraordinary powers, its uses and application in the arts is most extensive, and perhaps no production, from its universal adaptation, ever obtained or deserved more attention from the chemists; but I very much doubt whether any person has yet been able to give a demonstrative definition of the principles of its various action.

The application of lime in agriculture has been justly described to have rendered sterile lands fertile, and fertile lands sterile. To speak of it, therefore, as a manure is evidently absurd, and calculated to mislead. The meaning of the term *alterative*, as it is used in medicine, is generally understood, and this appears to me to be the proper denomination for lime, when applied to the cultivation of land.

Sir Humphry Davy, has given a clear and minute detail of the component parts of the basis of lime, or lime-stone, and of the chemical principles of its formation and action; but either from a want of a more marked distinction between the effects of quick lime and slacked lime, or from some other cause, his observations, by no means accord with mine.

He says, "Lime forms a kind of insoluble soap with oily matters, and then gradually decomposes them by separating from them oxygene and carbon; it tends to diminish, likewise, the nutritive powers of albumen from the same causes, and always destroys, to a certain extent, the efficacy of animal manures, either by combining with certain of their elements, or by giving to them new arrangements. Lime should never be applied with animal manures, unless they are too rich, or for the purposes of preventing noxious effluvia; as in certain cases mentioned in the last lecture, it is injurious when mixed with any common dung, and tends to render the extractive matter insoluble."

Now, as I have before observed, I have mixed the crassamentum, or clotted part of blood, with *quick lime*, which formed a kind of *insoluble* soap, and was therefore inapplicable as food for plants; but mixed with *slacked lime* it formed a perfectly *soluble* soap, and thus rendered the albumen immediately applicable and inodorous, which left to itself could not have become so, until it had undergone the putrefactive fermentation, and have thus generated and diffused a most noxious effluvia.

He again says, "In those cases in which fermentation is useful to produce nutriment from vegetable substances, lime is always efficacious."—Now in the experiment I have just explained, it

prevented the fermentation, and I have always found this to be its peculiar property.

Parkes says, "It appears from several late experiments carefully made, that sugar is composed entirely of hydrogene, oxygen, and carbon. Mr. Cruikshank made many experiments on fermentation, and invariably found that whenever he added a fourth substance to the three which compose saccharine matter, no fermentation took place; *he tried lime*, and at another time a small quantity of potash, and the addition of either *prevented fermentation.*"

Sir Humphry Davy also says, "Quick lime in its pure state, whether in powder or dissolved in water, is injurious to plants."

I have found slacked lime, when sown or spread over plants of all kinds and stages of growth, to destroy slugs, *effectually* perform this, and without in the least injuring the plants.

As it must appear from these observations, that I cannot practically and beneficially, further apply the inferences of Sir Humphry Davy, regarding the uses of lime in agriculture, I shall not obtrude any further remarks on his ideas on the subject; but shall give an extract from the Encyclopædia Britannica, which appears to me to be more clearly, if not correctly, explanatory of the uses and effects of lime in agriculture: but even this author, seems either not to have understood the principles of the action of lime, or to have erroneously described them. He speaks of lime as a *septic*, and of its assisting and hastening putrefaction; but as before shown, lime possesses a directly opposite quality; it not only prevents, but arrests putrefaction, and is therefore in fact, *antiseptic;* and it is the action of this principle which renders soils prolific. Lime is certainly, a most powerful agent in the decomposition of animal and vegetable matter, but it is on a principle more analagous to that of fire; as in the instances before stated, it not only prevents the effects of putrefaction, which are obnoxious to vegetables, but it accelerates the formation of those compounds which are essential to fertility.

It is stated in the Encyclopædia Britannica, "Where the ground has been suffered to remain uncultivated for many ages, producing all that time succulent plants, which are easily putrefied, and trees, the leaves of which, likewise contribute to enrich the ground, by their falling off and mixing with it, the soil will in a manner be totally made up of pure vegetable earth, and be the richest when cultivated, that can be imagined. This was the case with the lands of America; they had remained uncultivated perhaps since the creation, and were endowed with an extraordinary degree of fertility; nevertheless, we are assured by one who went to America, in order to purchase lands there, that such grounds as had been long cultivated, were so much exhausted, as to be worse than the generality of ground in this country. Here then we have an example of one species of poor soil, namely, one that has been formerly very rich, but has been deprived by repeated cropping, of the greatest part of vegetable food it contained. The farmer who is in possession of such ground, would no doubt willingly restore it to its former state; the present question is, what must be done in order to obtain this end? We have mentioned several kinds of manures, which long practice has recommended as serviceable for improving ground. We shall suppose the farmer tries lime or chalk; for, as has been seen, their operations upon the soil must be precisely the same. This substance being of a *septic* nature, will act upon such parts of the soil as are not putrefied or but imperfectly so; in consequence of which, the farmer will reap a better crop than formerly. The *septic* nature of the lime is not altered by any length of time. In ploughing the ground the lime is more and more perfectly mixed with it, and gradually exerts its power on every putrescible matter it touches. As long as any matter of this kind remains, the farmer will reap good crops; but when the putrescible matter is exhausted, the ground then becomes perfectly barren, and the caustic qualities of the lime are most unjustly blamed for *burning* the ground, and reducing it to a *caput mortuum;* while it is plain, the lime has only done its office, and made the soil yield all that it was capable of yielding. When ground has been long uncultivated, producing all the time plants not succulent, but such as are very difficultly dissolved, and in a manner incapable of putrefaction, there the soil will be excessively barren, and yield very scanty crops, though cultivated with the greatest care. Of this kind are those lands covered with heath, which are found to be the most barren of any, and the most difficultly brought to yield good crops. In this case lime will be as serviceable as it was detrimental in the other; for by its *septic* qualities, it will continually reduce more and more of the soil *to a putrid state*, and thus there will be a constant succession of better and better crops, by the continual use of lime, when the quantity first laid on has exerted all its force. By a continued use of this manure, the ground will be gradually brought nearer and nearer to the nature of garden mould, and no doubt, by proper care, might be made as good as any: but it will be as great a mistake to imagine, that by the use of lime this kind of soil may be rendered perpetually fertile, as to think that the other was naturally so; for though lime enriches the soil, it does so, not by adding vegetable food to it, but by preparing what it already contains; and when all is properly prepared, it must as certainly be exhausted as in the other case.

"Here then we have examples of two kinds of poor *soils;* one of which is totally destroyed, the other greatly improved by lime; and which therefore require very different manures: lime being more proper for the last than dung, while dung being more proper to restore an exhausted soil than lime, ought only to be used for the first. Beside dunging land which has been exhausted by long cropping, it is of great service to let it lie fallow for some time; for to this it owed its original fertility, and what gave the fertility originally cannot fail to restore it in some degree.

"By attending to the distinctions between the reasons for the poverty of the two soils just now mentioned, we shall always be able to judge with certainty, in what cases lime is to be used, and when dung is proper. The mere poverty of a soil is not a criterion whereby we can judge; we must consider what hath made it poor. If it is naturally so, we may almost infallibly conclude that it will become better by being manured with lime. If it is *artificially* poor, or exhausted by continual cropping, we may conclude that lime will entirely destroy it. We apprehend that it is this natural kind of poverty only, which Mr. Anderson says in his Essays on Agriculture, may be remedied by lime; for we can scarce think that experience would direct any person to put lime upon land already exhausted. His words are, 'Calcareous matters act as powerfully upon land that is naturally poor, as upon land that is more richly impregnated with those substances that tend to produce a luxuriant vegetation. Writers on agriculture have long been in the custom of dividing manures into two classes; viz. *enriching* manures, or those that tend directly to render the soil more prolific, however sterile it may be; among the foremost of which was dung: *exciting* manures, or those that were supposed to have a tendency to render the soil more prolific, merely by acting upon those enriching manures that had been formerly in the soil, and giving them a new stimulus, so as to enable them to operate anew upon that soil which they had formerly fertilised, in which class of stimulating manures, *lime* was always allowed to hold the foremost place.

"In consequence of this theory, it would follow that lime could only be of use as a manure when applied to rich soils, and when applied to poor soils would produce hardly any, or even perhaps doubtful effects.

"I will frankly acknowledge, that I myself was so far imposed upon by the beauty of this theory, as to be hurried along with the general current of mankind, in the firm persuasion of the truth of this observation, and for many years did not sufficiently advert to those facts that were daily occurring to contradict this theory. I am now, however, firmly convinced from repeated observations, that lime and other calcareous manures produce a much greater proportional improvement upon poor soils, than such as are richer. And that lime alone upon a poor soil, will, in many cases, produce a much greater and more lasting degree of fertility than dung alone.'

"Thus far Mr. Anderson's theory is exactly conformable to the theory we have laid down, and what ought to happen according to our principles. He mentions, however, some facts which seem very strongly to militate against it, and, indeed, he himself seems to proceed upon a theory altogether different.

"Calcareous matter alone (says he) is not capable of rearing plants to perfection: mould is necessary to mix with it in certain proportions, before it can form a proper soil. It remains, however, to be determined what is the due porportion of these ingredients for forming a proper soil.

"We know that neither chalk, nor marl, nor lime, can be made to nourish plants alone; and soils are sometimes found that abound with the two first of these to a faulty degree, but the proportion of calcareous matter in these is so much larger than could ever be produced by art, where the soil is naturally destitute by these substances, that there seems to be no danger of erring on that side. Probably it would be much easier to correct the defects of those soils in which calcareous matters superabound, by driving earth upon them as manure, than is generally imagined; as a very small proportion of it sometimes affords a very

perfect soil. I shall illustrate my meaning by a few examples.

"Near Sandside, in the county of Caithness, there is a pretty extensive plain on the sea-coast, endowed with a most singular degree of fertility. In all seasons it produces a most luxuriant herbage, although it never got any manure since the creation, and has been for time immemorial subjected to the following course of crops.

"1. Bear after once ploughing, from grass, usually a good crop.

"2. Bear, after once ploughing, a better crop than the first.

"3. Bear, after once ploughing, a crop equal to the first.

"4. 5. and 6. Natural grass, as close and rich as could be imagined, might be cut if the possessor so inclined, and would yield an extraordinary crop of hay each year: after this the same course of cropping is renewed.

"The soil that admits of this singular mode of farming, appears to be a pure incoherent sand, destitute of the smallest particle of vegetable mould; but upon examination it is found to consist almost entirely of broken shells; the fine mould here bears such a small proportion to the calcareous matter, as to be scarcely perceptible, and yet it forms the most fertile soil that ever I yet met with."

The writer of this article in the Encyclopædia accounts for this fertility, by supposing that from its vicinity to the sea, it derives its prolific powers from the salt water; but by adverting to the principles I have laid down, a much more probable arrangement and combination may be suggested. In the first place, we may suppose that the mechanical texture of the soil and sub-soil is such, and so situated as not only to obtain a supply of fresh water, but to admit of, and facilitate, a constantly ascending and descending motion of such water; and that its chemical constitution is such, as to facilitate the decomposition and reduction of the roots, leaves, and stalks of the vegetables, regularly deprived of life, to a soluble state, *without the process of putrefaction*, and its consequent loss in carburetted hydrogene gas, &c.

All calcareous earths may alike possess antiseptic powers but all do not possess the capacity of operating so effectually as that here described, to supply the requisite motion, change, and quantity of water, by percolation and capillary attraction, and consequently no other can be equal in its fertility.

Sir H. Davy has given a minute analysis and description of almost every kind of soil, and explained the means of chemical investigation. But as, I think, what has been said will be sufficient to enable every person to form a pretty correct judgment of the capacity and constitution of soils, as adapted to the general purposes of husbandry; I shall not enter more particularly on this part of the subject, but must refer those who wish for such information, to his work on agricultural chemistry.

Large Lemon.—A lady in this town has a lemon which grew on a tree in her possession, weighing half a pound and measuring 9 inches in circumference. Not so bad for Jersey soil—*West Jersey Observer.*

THE GARDENER.

From Bridgeman's "Young Gardeners' Assistant."

General remarks. On the management of a kitchen garden.

Before I commence the Catalogue, it may be necessary for me to direct the reader's attention to some important matters essential to the good management of a Kitchen Garden.

The mode of laying out the ground, is a matter of taste, and may be left to the gardener himself; the form being a thing of trifling importance in the production of useful vegetables, or whether the ground be laid out in beds of four or ten feet wide, provided it be well worked, and the garden kept neat and free from weeds.

Those who have not a garden already formed, should, however, fix on a level spot where the soil is deep; but as we have not always a choice, I would recommend the reader to that which is within his reach, and ought to be the object of every man, namely, to make the most of what he has.

To this end, he may form a border round the whole garden, from five to ten feet wide, according to the size of the piece of land; next to this border, a walk may be made from three to six feet wide; the centre part of the garden may be divided into squares, on the sides of which a border may be laid out three or four feet wide, in which the various flowering plants may be raised, unless a separate flower garden is intended. The centre beds, may be planted with all the various kinds of vegetables as well as Gooseberries, Currants, Raspberries, Strawberries, &c. The outside borders facing the East, South and West, will be useful for raising the earliest fruits and vegetables, and the North border being shady and cool, will serve for raising, and pricking out such young plants, slips and cuttings as require to be screened from the intense heat of the sun. It may be necessary to state further, though shady situations are useful for the purpose of raising Celery, Cabbage and other small plants, slips &c., in the summer season, that all standard trees should be excluded from a Kitchen Garden, for the following reasons:—First, their roots spread so widely and imbibe so much moisture from the ground that little is left for the nourishment of any plant within the range of their influence;—Secondly, when in full leaf they shade a large space and obstruct the free circulation of air, so essential to the well being of all plants;—Thirdly, the dropping of trees is particularly injurious to whatever vegetation it falls upon.

Previous to entering on the work of the garden, the gardener should lay down rules for his future government. In order to this, he should provide himself with a blank book. In this book he should first lay out a plan of his garden, allotting a place for all the different kinds of vegetables he intends to cultivate. As he proceeds in the business of planting his grounds, if he were to keep an account of every thing he does relative to his garden, he would soon obtain some knowledge of the art. This the writer has done for the last twelve years, he flatters himself that a publication of the results of his practice, will be interesting and useful to his readers.

If gardeners were to make it a rule to record the dates and particulars of their transactions relative to tillage and planting, &c., they would always know when to expect their seeds to come up, and how to regulate their crops for succession; and, when it is considered that plants of the *Brasica* or Cabbage tribe, are apt to get infected at the roots if too frequently planted in the same ground, and that a rotation of crops in general is beneficial, it will appear evident that a complete register of every thing relative to culture is essential to the well being of a garden.

One great article to be attended to is, to have a supply of good old manure and other composts ready to incorporate with the earth; also a portion of ashes, soot, tobacco dust and lime, for the purpose of sowing over seed beds in dry weather; this will tend in a great measure to destroy insects, which sometimes cut off the young plants as fast as they come up.

If the ground cannot be all manured every year as it should be, it is of primary importance that those vegetables be provided for which most need manure. A perusal of the catalogue will enable the young gardener to judge of the kinds of garden products which require most. Lest I should not have been explicit enough in this particular, I would inform him, that good manure is indispensably necessary for the production of Brocoli, Cauliflower, Cabbage, Lettuce, Spinage, Onions, Radishes and Salands in general.

In the event of a scanty supply of manure, those kinds of vegetables which are raised in hills or drills, may be provided for by disposing of the manure immediately under the seeds or plants.

The next important matter is to have ground in suitable condition to receive the seed. I would wish it to be understood, that I am an advocate for early sowing and planting, even at the risk of losing a little seed, provided the ground be fit to receive it. A light sandy soil will be benefitted if worked when moist, as such treatment will have a tendency to make it more compact; on the contrary, if a clay soil be worked when too wet, it kneads like dough, and never fails to bind when drought follows, and this not only prevents the seeds from rising, but injures the plants materially in their subsequent growth, by its becoming impervious to the moderate rains, dews, air and influence of the sun, all which are necessary to the promotion of vegetation.

Some gardeners, as well as some writers, recommend certain fixed days for sowing and planting particular kinds of seeds; I think it necessary to guard my readers from being misled. The failure of crops may be attributed to the observance of certain days for sowing. If some kinds of seeds be sown when the ground is wet and cold, they will become chilled in the ground, and seldom vegetate. If they be sown in very dry weather, the germinative parts of the seed may become injured by the burning rays of the sun, or the young plants may get devoured by insects as fast as they come up. To obviate these difficulties, I have generally allowed a week or ten days for the sowing of the seeds, intending the medium as the proper time for the vicinity of New-York. With this clearly borne in mind, the reader, who observes the difference in the degrees of heat and cold in the different parts of the country, will know how to apply these instructions accordingly.

Much depends on the manures used on particular kinds of soils. The great art of improving sandy and clayey soils, is to give the former such dressings of clay, cow dung and other kinds of manure, as will have a tendency to bind and make them more compact, and consequently more retentive of moisture; and to the latter, coats of horse dung, ashes, sand, and such other composts as may tend to separate the particles and open the pores of the clay so as to cause it to approach as near as possible to a loam.

The nearer the ground approaches to a sandy soil, the less retentive will it be of moisture; the more to a clayey, the longer will it retain it; and the finer the particles of which the clay is composed, the more tenacious will it be of water, and consequently be longer in drying, and the harder when dry; but earth of a consistence that will hold water the longest, *without becoming hard when dry*, is that of all others, the best adapted for raising the generality of plants in the greatest perfection. This last described soil is called loam, and is a medium earth, between the extremes of clay and sand.

I have in most cases recommended drills to be made at certain depths for the different kinds of seeds, and when I have stated that the drills should be two inches deep, it is intended that the seeds should be covered only one inch, which they will be when planted in these drills and covered —and so in proportion for any other depth required. This may serve as a guide to the young gardener, but circumstances alters cases; if for instance, some particular crops should fail, this would render it necessary, if the season be far advanced, to risk a further planting of seeds, even if the weather be hot and the ground dry; if these be planted a little deeper, they may escape the violent heat of the sun; and in the event of a shower, the ground would become sufficiently moist to bring them up; whereas, it sometimes happens, that seed sown after a shower do not vegetate until after the season is too far advanced to bring the crop to perfection.

The work of drilling may be performed in various ways; in some cases a plough is used, in others a small hoe, or a dibble drawn along the edge of a border or line; it is of little consequence which way the work is done, if it be well done. While I leave the gardener to make his own choice of tools, I would suggest that he be provided with two or three drilling machines; these, every handy man may make for himself; they should be in the form of a garden rake with a stout heavy back and five teeth two inches broad, and tapered so as to enter the ground and leave drills two inches deep. If one be made with the teeth eight inches apart, another twelve, and another fourteen, they will be useful in making drills for various seeds, and drills thus made, serve instead of straining a line, for every row in planting Cabbage, Lettuce, Leeks, &c., the line being strained at one edge of the bed, and the drilling machine drawn straight by the line, making five drills at once. If they are straight they may be kept so, by keeping one drill open for the outside tooth to work in until the ground be all drilled.

Gardeners practice different methods of covering up seeds, some do it with a hoe, others with a rake or harrow; some draw a portion of the earth to the side of the bed, and after sowing the seeds, return it regularly over the bed; in some particular cases a sieve is used, in others a roller. Rolling or treading in seeds is necessary in dry seasons, but it should never be done when the ground is wet.

There is nothing that protects the young crops of Turnips, Cabbages and other small plants from the depredations of the fly, so well as rolling; for when the surface is rendered completely smooth, these insects are deprived of the harbour they would otherwise have under the clods and small lumps of earth. This method will be found more effectual than soaking the seed in any preparation, or dusting the plants with any composition whatever; but as the roller must only be used previous to, or at the time of sowing the seed, and not even then if the ground be wet; it is necessary that the gardener should have a hogshead always at hand in dry weather containing infusions made of waste tobacco, lime, soot, cow dung, elder, burdock leaves, &c. A portion of these ingredients, or any other preparation that is pernicious or poisonous to insects, without injuring the plants, thrown in to a hogshead kept filled up with water, if used moderately over beds of young plants in dry weather, would, in almost every case, insure a successful crop.

As liquid however cannot be conveniently used on a large piece of land, it may be necessary, if insects are numerous, to sow tobacco dust mixed with road dust, soot, ashes, lime or the dust of charcoal, in the proportion of half a bushel per acre, every morning, until the plants are free or secure from their attacks. Turnip seed will sometimes sprout in forty eight hours, Cabbage seed ought to come up within a week after it is sown; but it sometimes happens that the whole is destroyed before a plant is seen above ground; the seedsman, in this case, is often blamed without a cause. A correspondent has communicated the result of an experiment he has tried for preventing the attacks of flies or fleas on Turnips. He says, steep your seeds in a pint of warm water for two hours, in which is infused 1 oz. of saltpetre; then dry the seed and add currier's oil sufficient to wet the whole, after which mix it with plaster of Paris so as to separate and render it fit for sowing.

In the summer season Brocoli, Cabbage, Cauliflower, &c., are particularly subject to the ravages of grubs and caterpillers; to prevent this wholly is impossible, but it is not difficult to check these troublesome visiters, this may be done, by searching for them on their first appearance and destroying them; early in the morning grubs may be collected form the earth, within two or three inches of such plants as they have attacked the night previous. The approach of caterpillers is discoverable, on the leaves of Cabbages, many of which are reduced to a thin white skin, by the minute insects which emerge from the eggs placed on them; these leaves being gathered and thrown into the fire, a whole host of enemies may be destroyed at once; whereas, if they are suffered to remain, they will increase so rapidly, that in a few days, the plantation, however extensive, may become infested; now, when once these arrive at the butterfly or moth stage of existence, they become capable of perpetuating their destructive race to an almost unlimited extent. The same remarks apply to all other insects in a torpid state. Worms, maggots, snails or slugs, may be driven away by sowing salt or lime in the Spring, in the proportion of from two to three bushels per acre, or by watering the soil occasionally with salt and water, to the quantity of about two pounds of salt to four gallons of water; or the slug kind may be easily entrapped on small beds of plants, by strewing slices of turnip on them late in the evening; the slugs or snails will readily crowd to them, and may be gathered up early in the morning (before sunrise) and destroyed.

If it be necessary at any time to sow seeds in dry weather, it is recommended to soak the seeds in water mixed with sulphur. This practice, with attentive watering, will cause the seed to vegetate speedily.

Many kinds of seeds such as Asparagus, Capsicums, Celery, Fetticus, Leeks, Lettuce, Onions, Parsnip, Parsley, Rhubarb, Salsify, Spinage, and other light seeds will not vegetate freely unless the ground be watered, or rolled; where there is no roller on the premises, the following may answer for small beds as a substitute: after the seed is sown and the ground well raked, take a board (or boards) the whole length of the bed, lay them flat on the ground, beginning at one edge of the bed, walk the whole length of the board, this will press the soil on the seed, then shift the boards till you have thus gone over the whole bed. In the absence of boards, tread in the seed with your feet, or strike on the beds with the back of your spade, or shovel.

If it should be requisite to transplant any thing when the ground is dry, the transplanting should be always done as soon as the earth is fresh turned over, and the roots of the plants should be steeped in mud made of rich compost, before they are set out.

I have in most cases recommended seeds to be sown in drills drawn from 8 to 12 inches apart, in preference to sowing broadcast, because the weeds can be more easily destroyed by the means of a small hoe; and which, properly used, greatly promotes the growth of young plants.

The following table may be useful to the gardener in showing the number of plants, or trees, that may be raised on an acre of ground, when planted at any of the undermentioned distances.

Dist. apart.	No. of plants.	Dist. apart.	No. of plants.
1 foot,	43,560	9 feet,	537
1 1-2 feet,	19,360	12 feet,	302
2 feet,	10,890	15 feet,	193
2 1-2 feet,	6,969	18 feet,	134
3 feet,	4,840	21 feet,	98
4 feet,	2,722	24 feet,	75
5 feet,	1,742	27 feet,	59
6 feet,	1,210	30 feet,	48

The preceding table may serve as a guide to such as are not expert in the arithmetic, in laying out a garden, as it shews at one view many proportions of an acre of land, in squares of different dimentions. The last line, for instance, shews, that if 48 trees be planted on an acre, each thirty feet apart, that there may be forty-eight beds of thirty feet square, and thirty beds of forty-eight feet square, formed from the same quantity of land. An allowance of about one eighth must however be made from the above calculation for walks and paths.

The table may also serve to show the gardener how to dispose of any given quantity of manure, that may be allotted for an acre of ground. If for instance, it requires three hundred and two trees to plant an acre when placed twelve feet from each other, it will require as many heaps of manure to cover the same quantity of ground, if dropped the same distance apart. It therefore follows that if one hundred loads be allowed to the acre, each load must be divided into three heaps. If seventy five loads only be allowed, every load must be divided into four heaps, and so on in proportion to the quantity allowed. But if the gardener should choose to drop his heaps, five paces, or fifteen feet apart, he may make such distributions of his loads as to have one hundred and ninety-three heaps on the acre of land; in which case by dividing each load into four heaps he will require only forty-eight loads to cover the acre, and he may decrease the quantity still more, by allowing greater distances from heap to heap, or by dividing his loads into smaller proportions so as to accommodate himself to whatever quantity of manure he may allot to cover any given quantity of ground.

THE BREEDER & MANAGER.

From the [London] Lancet, for 1831—'32.

INTRODUCTORY LECTURE ON VETERINARY MEDICINE AND SURGERY:—*By Mr. Youatt—delivered at the University of London, Wednesday, October* 5, 1831.

GENTLEMEN:—When, in the beginning of the present year, I had the honor to appear in this place as a *permitted* lecturer on veterinary medicine and surgery, I thought it a proud day for the degraded and undervalued profession to which I belonged. I felt truly grateful to the Council of this excellent institution, that they, first among the universities of England, bestowed, although perhaps but for a little while, their fostering patronage on this disregarded branch of science,—a branch of science, however, connected with many of the rational enjoyments of life—with human medicine, and the agricultural interests of the country.

I will not now speak of the deep feeling of responsibility that alternately stimulated and depressed every mental energy when I stood first and alone in such a place, the imperfectly-recognised advocate of an art to which, from habit, as well as from a conviction of its importance, I was ardently attached; but I will speak of the kind encouragement I experienced from some of the professors whom I now see before me, which I so much needed, and which they, unsolicited, and beyond what I dared to hope, bestowed; and I will speak too of the uniform attention and expression of regard which I received from a class, small indeed, but which did not disgrace even this institution; and their manifest improvement in veterinary science, creditable to themselves, and the most dearly-cherished reward they could yield their preceptor; and I will tell them that if ever their object and mine is accomplished, and the veterinary art is permitted to assert her just rank, there is one who will never forget how mainly they were instrumental in accomplishing this purpose, and the recollection of them will be associated with some of the happiest, because the most useful hours of his life.

And now, gentlemen, when I can stand before you the *appointed* lecturer on veterinary medicine and surgery—when the temporary shelter is exchanged for a permanent abode—when the art I am to teach is acknowledged to be a legitimate branch of medical and scientific education—when the claim of relationship is sanctioned by those who are the best judges of the degree of consanguinity, I can only say in behalf of my profession and myself, that we are thankful—that we will endeavor not to disgrace the alliance, and that we will become, although inferior, yet zealous, and we trust, not quite unsuccessful laborers in the cause of science and humanity.

In the prospectus of the University, veterinary surgery stands acknowledged as one of the divisions of the medical school. While I am grateful for this I must be permitted to maintain that it is an act of justice that has been too long delayed in our schools and by the public. The veterinarian had perhaps contributed to the refusal of the claim, by his lack of education, or his unprofessional bearing or conduct,—too glaring and too degrading, I must confess, in times past. Many centuries, however, have not elapsed since our elder brethren of the medical profession were not much better educated, and but little more worthy of respect. They have attained the rank in society to which they are justly entitled, and we are attempting to follow them *haud passibus æquis*, but surely, we trust, although slowly.

In the earliest period of medical history veterinary surgery was acknowledged as a branch of the medical profession. If we may believe the annals of very ancient times, Chiron, the son of Saturn, and the preceptor of Æsculapius, obtained the name of Centaur, a strange compound of man and horse, not only, as is commonly said, on account of his skill in horsemanship, but his knowledge of that animal and his diseases, for he was a teacher of medicine.

Many centuries afterwards flourished Hippocrates, "the father of medicine." He was acquainted with, and wrote concerning, if he did not practice the veterinary art. It is somewhat singular that a late author, who has published "A History of Medicine, Surgery, and Anatomy, from the Creation of the World," while he does full justice to the claims of Hippocrates, as a zealous and profound comparative anatomist, says nothing of one result of his researches into the structure of the inferior animals, a knowledge of their diseases; nor of his work which still survives, and with which that writer ought to have been acquainted, and which is pregnant with useful information, even at the present day, on every branch of the veterinary art.

The truth of the matter is, that Dr. Harrison affords a tolerably accurate although a mortifying proof of the low estimation in which veterinary science has been, and is by many held; for from the beginning to the end of his work he does not say a single word of the veterinary practitioner or veterinary practice. Well! be it so. We will endeavor to remedy this in the right way.

To pass over many writers on veterinary affairs, suffice it to mention, that, although it will probably never again occur, for it would not suit the present very proper divisions of medical practice, we have reason to believe that in Greece, and we know that in Rome, the same person frequently if not generally, practiced both human and veterinary surgery. If we recur to the history of human medicine in our own country in the earlier ages, there was much association between the surgeon and the veterinarian, if not an identification of person. The farrier, from his experience in the use of the instruments of his forge, was often called in to the aid of the human practitioner. He was the principal operator, or the consulting surgeon: or rather, he flourished for a long period when the human surgeon was scarcely heard of. He acted under the direction of the leech of the monastry, or the Lady Bountiful of the castle, or he operated too frequently on his own responsibility, and the practice of medicine was disgraced by many of his absurd and barbarous customs.

In process of time, the value of life, and the lives of those we love, and the comfort of life as connected with a state of freedom from pain, awoke the public mind to the necessity of a reform in medical practice, and, by steps which it becomes not me to trace, the human practitioner has arisen to deserved eminence.

The farrier had not the same chance: the same motive did not operate on the public mind, or on the minds of those by whom the public was influenced. Domesticated animals were then of comparatively little value. The Arab blood had not produced the unrivalled English courser. The cattle and sheep were stinted in their growth, and little celebrated either for beauty or produce. They were not in the hands of large and opulent proprietors, who might have both the spirit and the means to improve them, but, in those of the vassals, who then paid their rent in kine and not in money, in cattle, and poultry, and corn, for the consumption of the chieftain's household, and who cared little about the quality of the beasts, if they only furnished the requisite number of heads. The enslaved, and consequently ignorant peasant, neither attempted to prevent or to cure the diseases of any of his domesticated animals, nor would he employ others to do either; but if the assistance of any one was required, it was that of the wise man of the glen, who with many a strange incantation was to extract the *elf-bolt*, or to kindle the *need-fire*, or to produce the *devote smoke*, or to point out some poor persecuted wretch who was to be pricked and tortured until she reversed the fatal charm. It is not then to be wondered at, that veterinary science should have lagged behind, when her elder sister was advancing to honor and emulation.

The importance of horses and of cattle—the formation of veterinary schools—the progress of general education—the establishment of veterinary societies—and the diffusion of veterinary periodicals, have gradually brought forward a different class of men; not perhaps, even yet, taking them as a body, altogether worthy of their profession, but somewhat more deserving—more sensible of the nature and value of their profession—more anxious to improve themselves and it—more worthy of public confidence, and a little more resembling medical men. In consequence

of this, the rank in society which the veterinary practitioner occupied, has been materially raised; the English veterinary surgeon in a cavalry regiment is a commissioned officer, and in one of the Scotch, and many of the continental Universities, the veterinary lecturer occupies a professor's chair.

When, gentlemen, I had the honor to address some of you in February last, I ventured to maintain that ours was a branch of the medical science, because there was an identification of object. To preserve health and to relieve disease, are the common objects of the human surgeon and the veterinarian.

True, our patients are not possessed of the high intellectual powers of man. The support of a family, or the welfare of a kingdom, may not depend on the exertion of our skill; but there is that about our patients which will give interest and importance to our profession. I might speak of the pecuniary value of horses and cattle in their present state of improvement. At the period to which I allude, I calculated the proportion they formed of the general wealth of the state, and it was a very considerable one. I might also plead that the intellectual, aye, and even the moral qualities of many of our patients, rendered them highly deserving of our care.

"Superior as we are, they yet depend
Not more on human help than we on theirs.
Their strength, or speed, or vigilance, was given
In aid of our defects. In some are found
Such teachable and apprehensive parts,
That man's attainments in his own concerns,
Match'd with the experience of the brutes in theirs,
Are ofttimes vanquish'd, and thrown far behind.
And learn we might, if not too proud to stoop
To quadruped instructors, many a good and
Useful quality, and virtue too,
Rarely exemplified among ourselves.
Attachment never to be weaned or changed
By change of fortune: proof alike
Against unkindness, absence and neglect.
Fidelity that neither bribe nor threat
Can move or warp; and gratitude
For small and trivial favors, lasting as the life,
And glistening even in the dying eyes."

I might add to this, the consideration that we have taken from their native plains, and coerced and confined them, and too often exacted their labor with reckless cruelty, and entailed on them, by our absurd practices, or too frequent and disgraceful brutality, numerous diseases, and a premature death. I might content myself, however, with these undeniable facts, that *they are susceptible of pleasure and of pain;* that we can never be unprofitably or dishonorably employed while we are increasing the former and diminishing the latter, and that, while thus employed, we are in the strictest sense accomplishing the grand object of medical science. I will proceed to other grounds. The principle by which both are guided in the accomplishment of their noble object are the same. We have some excess of action to abate, or some defect of stimulus or of sensibility to supply, or some diseased habit to reform. We must prepare ourselves for practice precisely in the same way. We must become acquainted with the structure of the diseased part, or rather, of the animal generally. We must study deeply the natural and healthy function of every organ; we must acquire a knowledge of the connexion between change of structure and of function, or change of function and the gradual alteration of parts; we must diligently inquire into the causes of these changes, and the manner and extent to which they act, and how we shall best remove the cause, or arrest the effect, or repair the injury. We must make ourselves acquainted with the effect of medicinal agents, and as bearing on one or all of these points.

The process, then, is the same; the distinction is in the value of the patient, and human and veterinary practice differ in this particular, and in this alone. When, however, we inquire into the means by which our indications of cure are to be accomplished, we shall begin to find a variation, wider perhaps than the medical student imagined. The veterinarian is concerned with many patients, strangely different in general structure, and in the mechanism by which each function is performed. If the mechanism is different, the characters of healthy and diseased function will differ too, and our remedial measures will proportionally differ. We shall have to study this, in order that we may draw the proper inference from varieties of organization and function and disease.

[We very unexpectedly find ourselves obliged to divide this article, a practice which we are opposed to when not indispensably necessary. This Lecture will therefore be concluded in our next number.]

MISCELLANEOUS.

The Locusts again.—There is no longer any doubt that these singular insects are to make their usual periodical appearance the present season. They are already easily to be found, at the depth of six or seven inches, in gardens, and especially in orchards, under old trees. By skimming off the surface of the earth, thousands of holes are perceptible, where they have been penetrating to the surface, in order, we presume, that their way may not be obstructed on their day of general resurrection. An old gentleman of this place, informs us that his father kept particular note of their appearance in four instances; and that he himself has followed it up, and preserved observations, also, in four instances;—and that they have uniformly appeared every seventeen years; but what is singularly striking, that in all these eight instances they were found to have a general resurrection day, which has regularly occurred on the 25th May. He further says, that two or three days previously, a few make their appearance, as a reconnoitering party; but on the 25th, the whole country is deluged with one interminable swarm.—*Germantown Tel.*

A curious Horticultural anecdote.—When Sir Francis Carew had rebuilt his mansion house at Beddington in Surrey, he planted the garden with choice fruit trees. There he was twice visited by Queen Elizabeth; and Sir Hugh Platt, in his Gardens of Eden, tells a curious anecdote relating to one of these visits. "I conclude," says he, "with a conceit of that delicate knight, Sir Francis Carew, who, for his better accomplishment of his royal entertainment of our late Queen Elizabeth, led her majesty to a cherry tree, whose fruit he had of purpose kept back from ripening at least one month after all cherries had taken their farewell of England. This secret he performed by straining a tent or cover of canvass, over the whole tree, and wetting it now and then with a scoop, as the heat of the weather required; and so by withholding the sunbeams from reflecting upon the berries, they grew both great, and were very long before they had gotten their perfect cherry color; and when he was assured of her Majesty's coming, he removed the tent, and a few sunny days brought them to their maturity.—*Platt's Garden of Eden.*

A novel agricultural feat was performed in Rhode Island, a few days since. It was a ploughing match on a trial of skill in the use of the plough, among fifteen competitors. The projector engaged fifteen ploughs with the teams, to plough fifteen acres of "green sward," paying each a fair compensation and offering a premium for the best performance, according to certain specified rules. A committee was appointed to superintend the performance and examine the work. The trial employed sixty head of cattle, and was completed in from six to eight hours. It must have been a pleasing and exhilerating spectacle. Of such sports we have too few in this country. The desire for excitement unfortunately takes, in some cases, a more pernicious direction. It would be a national benefit if it could be converted into such innocent and profitable channels. The revival of a taste for these rural competitions would do much to soothe the acrimony of mere party squabbles, towards which the thirst for occupation and excitement, now leads; make the use of ardent spirits a less general resort, and relieve the tedium of too much leisure by the stimulus of rational amusement.—*Balt. American.*

The Crops.—The Reading (Pa.) Chronicle, says: "The crops of grain in this section of the country were never more promising. The rye is mostly in head. The present cold spell, it is presumed, will not materially affect their growth, so that the prospects of the husbandman are those of an abundance."

Unprecedented.—Mr. Josiah Marchant a watchman in several of the Factories in this Village, has been engaged for *four thousand seven hundred and forty-five nights*, (*thirteen years,*) in that business, during which time he never missed a night, nor drank a drop of liquor.—*Pawtucket Chronicle.*

In the French trial by jury, unanimity is not required for a verdict;—a majority of eight to four is competent to return a verdict.

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Horticultural Society of Maryland—Gama Grass Seed for distribution and for sale—Notice of Col. Powel's Stock of Cattle—Skinless Oats wanted—Notice of Plants from Capt. Matthews—Splendid Cauliflower—Law respecting Subscriptions—Progress of American Silk Business—A Maxim—On the Composition of Soils—Large Lemon—On the Management of a Kitchen Garden—Introductory Lecture on Veterinary Medicine and Surgery—Locusts—Method of retarding the ripening of Cherries—Ploughing Match—The Crops in Pennsylvania—Watchman—French Jury. Advertisements.

BALTIMORE PRODUCE MARKET.

☞*These Prices are carefully corrected every* WEDNESDAY.

	PER.	PROM	TO
APPLE BRANDY,	gallon.	$0 27	$—
BEANS, white field,	bushel.	1 50	1 75
BEEF, on the hoof,	100lbs.	6 50	7 00
CORN, yellow,	bushel.	55	—
White,	"	54	—
COTTON, Virginia,	pound.	10	12
North Carolina,	"	11	12¼
Upland,	"	11	13
FEATHERS,	pound.	36	37
FLAXSEED,	bushel.	1 00	1 25
FLOUR—Best white wheat family,	barrel.	6 50	7 00
Do. do. baker's	"	6 00	6 50
Do. do. Superfine,	"	5 50	6 00
Super Howard street,	"	4 87	5 00
" " wagon price,	"	4 75	—
City Mills, extra,	"	5 12	5 25
Do.	"	4 75	4 87
Susquehanna,	"	5 00	—
Rye,	"	3 37	3 50
GRASS SEEDS, red Clover,	bushel.	3 50	4 00
Timothy (herds of the north)	"	2 50	—
Orchard,	"	3 50	—
Tall meadow Oat,	"	2 50	—
Herds, or red top,	"	1 25	—
HAY, in bulk,	ton.	15 00	17 00
Pressed,	100 lbs	70	1 00
HEMP, country, dew rotted,	pound.	6	7
" water rotted,	"	7	8
LIME,	bushel.	30	35
OATS,	"	31	32½
OIL, linseed,	gallon.	85	— —
PEAS, red eye,	bushel.	80	—
Black eye,	"	90	1 00
Lady,	"	95	1 00
PLASTER PARIS, in the stone,	ton.	3 25	—
Ground,	barrel.	1 37	—
RAGS,	pound.	3	4
RYE,	bushel.	63	64
TOBACCO, crop, common,	100 lbs	3 50	5 00
" brown and red,	"	4 50	6 00
" fine red,	"	6 00	8 00
" wrappery, suitable for segars,	"	6 00	12 00
" yellow and red,	"	8 00	12 00
" yellow,	"	13 00	17 00
" fine yellow,	"	15 00	22 00
Seconds, as in quality,	"	4 00	5 00
" ground leaf,	"	5 00	9 00
Virginia,	"	4 00	—
Rappahannock,	"	3 00	4 00
Kentucky,	"	4 00	8 00
WHEAT, white,	bushel.	1 10	1 20
Red,	"	95	1 00
WHISKEY, 1st pf. in bbls	gallon.	23½	24
" in hhds	"	21½	—
" wagon price,	"	20	—
WAGON FREIGHTS, to Pittsburgh,	100 lbs	1 37	—
To Wheeling,	"	1 62	—
		washed.	*unwash*
WOOL, Prime & Saxon Fleeces,	pound.	55 *to* 65	24 *to* 28
Full Merino,	"	45 55	22 24
Three fourths Merino,	"	37 45	20 22
One half do	"	30 37	18 20
Common & one fourth Meri.	"	25 30	18 20
Pulled,	"	28 32	16 20

Linseed Oil is in demand at our quotations.
Peas and Beans are scarce and much wanted.

IMPROVED SHORT HORNS.

MR. POWEL having left his farm, offers for private sale, his stock of improved short horned CATTLE, all of which have either been imported by him, or bred on his farm from animals selected for him in England.

Direct to WILLIAM COUCHES,
Care of John Hare Powel, Esq.
Powelton, April 17th, 1834.—May 9 9t

POINTERS.

FOR SALE, several Pointer Puppies, littered 22d Nov.; they are of the very best blood, and are all most beautifully formed, and marked, being white with liver spots.
Price $10 each. Apply to I. I. HITCHCOCK.

BALTIMORE PROVISION MARKET.

	PER.	FROM.	TO.
APPLES,	barrel.	$2 25	$—
BACON, hams,	pound.	10	—
Shoulders,	"	7	8
Middlings,	"	7	8
BUTTER, printed, in lbs. & half lbs.	"	25	37
Roll,	"	16	25
CIDER,	barrel.	3 50	5 00
CALVES, three to six weeks old	each.	4 00	6 00
COWS, new milch,	"	17 00	40 00
Dry,	"	9 00	12 00
CORN MEAL, for family use,	100lbs.	1 30	—
CHOP RYE, pure	"	1 50	—
EGGS,	dozen.	10	—
FISH, Shad, fresh,	100	10 00	11 00
" salted,	barrel.	6 00	6 50
Herrings, salted, No. 1 & 2,	"	3 50	3 62
Mackerel, No. 1, 2 & 3,	"	4 00	6 25
Cod, salted,	pound.	3½	—
LAMBS, alive,	each.	1 25	2 00
Slaughtered,	quart'r	37½	75
LARD,	pound.	8	9
POULTRY, Fowls,	dozen.	3 00	—
Chickens,	"	1 50	2 00
Ducks,	"	3 50	—
POTATOES, Irish,	bushel.	88	1 00
Sweet,	"	—	—
VEAL, fore quarters,	quart'r	50	75
Hind do.	"	75	1 00

ADVERTISEMENTS.

VINE DRESSER, FARMER & GARDENER.

A YOUNG FRENCH EMIGRANT, just arrived in this country, (having a wife with two children) is desirous of finding employment as a Vine Dresser, Gardener or Farmer, having been brought up to the business. His wife as well as himself will take part in such labors, if they can find employment. Any person wanting such assistance may apply (post paid) at "No. 8, Light-street Wharf," Baltimore, Md. May 16.

FRESH GARDEN SEEDS—NEW STOCK.

THE subscriber has now on hand a very extensive and complete assortment of GARDEN SEEDS, which he ventures to recommend to his customers and the public as *good* in every respect. He is prepared to execute orders either for dealers or families at the most reasonable rates at which *first rate articles* can be obtained.

AGENCY—He also acts as agent for the procurement of CLOVERSEED and various GRASS SEEDS whenever he has them not in store; also Agricultural IMPLEMENTS, Fruit and Ornamental TREES, SHRUBS, GRAPEVINES, &c. Orders for these must be accompanied by either cash, or directions to draw for it when the articles are shipped. He also attends to the purchase and sale of CATTLE and other domestic animals.

May 19. I. I. HITCHCOCK.

TURNING AND MILL SMITHING.

THE subscriber respectfully informs his friends and the public generally, that he has opened a Turning and Smith Shop adjoining Mr. William Miller's Foundry on the east side of Jones' Falls, opposite the Fish Market, where he is prepared to execute all kinds of Turning and Smith-work, and to fit up Rail Road work, Tobacco Presses, and Mill work generally. Also Stage and Coach Axles made or turned to order. All orders thankfully received and promptly attended to.

May 9. GEO. W. GWINN.

PLANTS.

FOR SALE at this establishment,
Early French, Early York, Early George, Flat Dutch, } CABBAGE PLANTS, at 50 cents per 100
Bullnose and Cayenne } PEPPER PLANTS at $1 pr 100
Mammoth Tomato Plants, at $1 per 100
Purple Egg do. at 25 cts. per doz.
May 9. I. IRVINE HITCHCOCK.

LUCERNE OR FRENCH CLOVER.

FEW articles of foreign introduction have ever succeeded so well as this valuable Clover. Many of the first Agriculturalists in our country have, and still continue to cultivate it with increasing success. We could give the most respectable names as references, but would merely mention as one, J. Buel, Esq. of Albany, who has given it the fairest trial and is fully satisfied of its utility and economy to the farmer; also, V. Livingston, Esq. Greensburgh, N. Y. The following is from James Byrd, Esq. Flushing, Long Island, who has cultivated it for the last ten years. He has kindly communicated to us the result of his latest experience, which should be carefully read by all agriculturists. Mr. B. is well known as one of the best farmers on Long Island, and what is not a little to his skill and reputation, he beat Cobbett hollow during the Ruta Baga war a few years since. Mr. C acknowledged that Mr. Byrd's mode of culture and returns exceeded his by all odds; he was struck with admiration when viewing his well kept field and superior quality of his Turnips—but we must proceed and in order to give the valuable Clover the widest circulation, we have reduced the price to 25 cents per lb.—was formerly 50 cents.

"FLUSHING, 2d mo. 1834.

G. T. & S.

Respected Friends:—I now hand you a particular statement how I managed my Lucerne.

1831. I this spring sowed 20 lb. of seed on my wheat about the time clover is usually sown, and harrowed it both ways with a sharp heavy iron tooth harrow. It came up well, and produced three good crops of hay the following year.

1832. Harrowed the lot three times over, and, in order to see whether it prove injurious, I had part of it done six times over. I did not find that it injured the plants, but had this good effect, that it killed nearly all the weeds and natural grass, and was very beneficial to the Lucerne.

1833. Had it well harrowed again this spring, and had three good crops of hay. I weighed part of the first crop after it was well cured, and found it produced nearly two and a half tons per acre.

The harrow ought to be made in two parts, and hung together with hooks and eyes, it being much easier to clear them from grass than when made in the usual way, and, in my opinion, are much better for all purposes: it ought to be so constructed as for the teeth not to follow each other. Be careful to pick up the stones after every harrowing, and it would be well to harrow it after every mowing. Light, dry land is best for the grass. Unless the land is very level, I think it would be best to place it in ridges twenty feet wide If sown in ridges, it must be always harrowed the long way. If any of your friends find it difficult to get harrows of the description I have given, they can procure them of *Whitehead Cornell*, Flushing.—The clover ought to be raised eight or ten inches above harrow, in order that it may run level; otherwise it will injure the plants. I had mine made with notches, to regulate the height. I am convinced that the best way to prepare land for Lucerne is to plough in *plenty* of manure in the spring, and plant it with corn, having it well ploughed and hoed, so as to be kept perfectly clean. In the fall, after taking off the corn, sow wheat, manured with ashes"

The seed now offered is what is called *Lucerne du Provence*—which simply means that it is the *Provence* seed, from Provence, the finest Lucerne county in France. We have never imported any other but this sort. Ours is from the first house in France, and growth 1833. We have never advertised it as *du Provence*, as many of our plain friends can't get their tongue around these *break jaw* names.

On hand, as usual, an extensive collection of Garden, Field, and Flower Seeds: Bird Seed of every sort.

Also, 100 bushels Orchard Grass Seed, growth of the last season, $2 50 per bushel; White and Red Clover, Timothy, Herds and Blue Grass, &c. &c.

G. THORBURN & SON, 67 Liberty st. N. Y.
may 16 2t

SUBSCRIBERS can have their volumes of the AMERICAN FARMER neatly half bound and lettered at this establishment, at 75 cents a volume. Most of the Nos. can also be had at 10 cents each, to complete files.

☞One set of the AMERICAN FARMER complete, in 15 vols. half bound and lettered, may be had at this establishment for $60. May 9.

Printed by SANDS & NEILSON, S. E. corner of Market and Calvert-streets.

THE FARMER & GARDENER;

AND LIVE-STOCK BREEDER & MANAGER.

CONDUCTED BY I. IRVINE HITCHCOCK, AND ISSUED EVERY FRIDAY FROM THE AMERICAN FARMER ESTABLISHMENT, AT $5 PER ANNUM, IN ADVANCE.

No. 3. BALTIMORE, MAY 23, 1834. Vol. I.

☞This publication is the *successor* of the late AMERICAN FARMER, (which is discontinued,) and is published at the same office, at five dollars per year, payable in advance.—☞When this is done, 50 cents worth of any kind of seeds on hand will be delivered or sent to the order of the subscriber with his receipt.

2. The *manner* of payment which is preferable to any other for distant subscribers, is by check or draft on some responsible party here, or else by remittance of a current bank note; and to obviate all objection to mail transmission, *the conductor assumes the risk.*

3. Subscriptions are always charged BY THE YEAR, and never for a shorter term. When once sent to a subscriber the paper will not be discontinued (except at the discretion of the publisher) without a special order, on receipt of which, a discontinuance will be entered, to take effect AT THE END of the current year of subscription.

4. Subscribers may receive the work either by mail in weekly numbers, or in monthly or quarterly portions; or else in a volume (ending in May annually), handsomely pressed, half bound and lettered (to match with the American Farmer) by such conveyance as they may direct: but the $5 must in all these cases be paid in advance.

☞ADVERTISEMENTS relating to any of the subjects of this paper will be inserted once at one dollar per square, or at that rate for more than a square, and at half that rate for each repetition.

American Farmer Establishment.

BALTIMORE: FRIDAY, MAY 23, 1834.

We copy below, from the Maine Farmer, an article which we recommend to the serious attention of our readers. If the subject of which it treats, applies to the Farmers of the State of Maine, much more forcibly do we think it would apply to the agriculturists of this and the adjoining States. The old adage of "whatever you do, do well," applies to the cultivator of the earth with as much force as to any other branch of business that can be named; and what is of equal importance in our branch is, not only to do well, but to do it in the proper time. How much more convenient, as well as more profitable, would it be to go over thirty acres of land, to obtain a given quantity of good, sound corn, that would bring the highest price in the market, than it would be to plough, harrow, and find seed for ninety acres, for the purpose of obtaining the same quantity of "soft cobs and green corn," fit only to give your horses the cholic.

A SMALL FARM THE BEST.

Mr. Holmes—I believe that it has been, and is admitted, by the knowing ones generally, that Maine is in the rear of her sister States in the art of Agriculture.

If this be the fact, is it not owing in a great measure to the eagerness that the farmers manifest in trying to obtain "all the land joining" them? Did not many of those who have now arrived to old age, did not they labor under this mistake, the more land the more profit. And have not their progeny got the same fault instilled into them? All the dollars they get must go into that particular "stocking" made for the purpose, and there remain until exchanged for land. Never willing to have it laid out in the way that would be the means of improving their stock, their fences, their buildings, and in procuring those conveniences that operate so beneficially to the progress and ease of their work both out and in doors.—Neither does it appear that they were willing to improve the land already in their possession, so that one acre would produce as much as two, three, and sometimes four or five; but their chief aim was to enlarge their farm. Now I believe this to be a great evil—an evil that greatly hinders the progress of agriculture. In the first place such men make slaves of themselves,—is it not quite likely that their work drives them too much? A large farm poorly managed, is I think one of small profit; and on a large farm, without an abundance of help, there is, in almost every kind of work that is undertaken, a slackness manifest throughout; and most generally at the time of planting, hoeing, haying, harvesting, there is manifested a complete bustle. And the consequence is, they get through with their work, as they say; then they can brag in high glee, they have outdone their neighbors—this irritates the neighbor and his boys, and they are led to slight their work. From the limited observation that I have had of the management and cultivation of the land in some of the neighboring States, I am fully persuaded that there can be more profits, for I suppose it is the profits that we are after, realized from fifty acres of land properly managed, than from a hundred, or perhaps a hundred and fifty. Without going out of the neighborhood for proof, I would say that a gentleman near by has a small garden spot, not half an acre, that he cultivates himself—by the way he is from Massachusetts—and he knows how to make the land yield a double crop. On this garden spot grows garden sauce of many kinds—he reserves one side of it to plant his corn—and I understood that last fall he took twenty-four bushels of ears of sound corn from that little spot—half of this was worth more than all the cobs that my father took from nearly four acres of ground that he had planted with corn. The ground was, he thought, well manured; but if it was well dressed, it was not manured right—he got nothing more than soft cobs and green corn.

I merely mention this because where the crops fail, it is generally "owing to the season," as many say. Now the climate or the season did not vary much with these neighbors, not near so much as they varied in the management of their crops. Good corn was raised last year on small farms where pains were taken, notwithstanding the failure of so many crops on large farms.—To close, I would say, let me have that which "constitutes the Farmers' happiness:—

"A little farm, well tilled,
A little barn, well filled,
A little ——, well-willed."

Walnut Hill, April, 1834. B. G. E.

CHOICE OF OCCUPATION.

It is a very common error with parents, in determining upon the future occupations of their children, to fix upon a profession, or some sedentary employment, for those of a weakly or delicate constitution; while to the robust and vigorous, is assigned a more active and laborious occupation, demanding considerable bodily exertion, and repeated exposure to the open air. As a general rule, the very opposite of this course should be pursued: the robust being the best able to bear up against the pernicious effects of that confinement and inactivity, to which the enfeebled constitution will very speedily fall a prey; while the latter will be materially benefitted by the very exertion and exposure to which it is supposed to be unadapted.

When we examine the individuals who compose the various trades and occupations, and find certain classes to present, very commonly, a pale, meagre, and sickly aspect, while others are replete with health, vigor, and strength; we are not to suppose that because the pursuits of one demand but little, and those of the other considerable bodily strength, the first are best adapted to the weakly, and the latter to the strong: we are rather to ascribe this very difference in their appearance, to the influence their several occupations exert upon the health of the system.

Let the most healthy and vigorous individual exchange his laborious occupation in the open air, for one which requires confinement within doors, and but little exercise, and his florid complexion, well developed muscles, and uninterrupted health, will very speedily give place to paleness, more or less emaciation, and debility, and occasionally to actual disease of the stomach or lungs. On the other hand, the reverse effects will be produced, by the sedentary exchanging, before it is too late, their confinement and inactivity, for some active employment in the open air. These are important considerations, an attention to which, in the choice of a profession; would be the means of saving not a little suffering,—in many instances of prolonging life.

GUMPTION.

When I see a young mechanic, who wants a good wife, that can make a pudding, spit a turkey, and nurse his babes, dangling after a piece of affectation, because she has been to a dancing school, and can play on a piano, I guess he has not much gumption.

THE FARMER.

To the Editor of the Farmer & Gardener:

I am very much gratified, sir, at seeing your proposals come out, for continuing that highly useful work, the American Farmer; the perusal of which for a long time, occupied many of my leisure hours, both agreeably and usefully. I should consider the discontinuance of that valuable work, a public loss, at this time, when, I believe, agricultural improvement is about to receive a new impulse.

The legislature of Maryland, at its last session, made provision for a geological survey of the state, and appointed to the task of carrying the law into execution, a gentleman well qualified to do justice to the cause. If our farmers, on their part, will make the proper application of the new light, which, he may shed on the mineral productions of our country; especially such as are applicable to agriculture, and the arts, this measure will be likely to assume a prominent position in History, among the governmental "Experiments" of our day.

In travelling on the Eastern Shore of this state, I have, in many places, observed indications, of that valuable mineral substance called marl; which appears to exist in considerable quantities; and, I have been informed, it has been employed with advantage to the grain crops. I have not understood that it has been used here, in that way, which experience, in other places, has pointed out as its most profitable application. I have been familiar with the use of this mineral, as a manure, for more than twenty years, in neighbouring states; and have, in many instances, witnessed the most wonderful improvement from its application. There is a great variety in the composition of this article; all of which require a corresponding difference in the component parts of the soil to which it is to be applied, for profitable results. He who goes to work with this manure without a knowledge of the composition, of either his soil, or his marl, will but flounder in an uncertain ocean of wild 'experiment', and in many instances may expect to lose both his labour and his 'deposits.'

In New Jersey there are three principal strata of this substance, differing materially in their composition, and their adaptation for particular soils—The first stratum lies near the Delaware, is met with along the banks of creeks, and in the bottoms of wells—In one instance within my knowledge, it was penetrated nearly one hundred feet; but without going through the layer. This abounds with a large proportion of shells, and other fossil remains. The second stratum, farther up the country, has fewer shells, of a black color, and is granulated, by reason of which it has obtained the name of Gunpowder marl. The third stratum lies still farther up the streams, and bordering on the regions of pines—this species is strongly impregnated with sulphurous acid; so much so, in some instances, as to corrugate and even excoriate, the cuticle on the hands of the laborers, in the pit—has no undecomposed shells, colour black, green, and sometimes blue, which has been used as a pigment for painting—I was acquainted with one tract of land which abounded with this latter species of marl, and was rendered almost entirely barren—With the exception of here and there a shrubby white oak, the soil was almost as bare as the beaten pathway. It had not been thought to be worth the expense of an inclosure, until it fell into the hands of a gentleman, who understood something of the science, as well as the art of Agriculture, and knew how to appreciate the value of a retort, in the hands of a ploughman. On discovering the composition of his sterile soil, he knew how to apply the appropriate remedy, and after enclosing a lot, it was ploughed deeply, dressed with a coat of the hydrate of lime, and laid down to clover; and a finer crop of that valuable grass, I never witnessed—here the uncombined acid of the soil, uniting with the calcareous matter, formed the sulphate of lime, or plaster of paris, which enters largely into the composition of clover, and forms its proper nourishment.

At this cheap rate, was this barren waste converted into a rich and beautiful meadow; not exceeded in value, by any bottom meadow within my knowledge.

Had marl of the first mentioned species been applied to this land, it would have produced the same effect, in proportion to the quantity of undecomposed calcarious matter which it contained—The second species would have produced little or no effect—but had the last mentioned kind been used, it would have been like adding fuel to the flame, and would have rendered the sterility more lasting and obstinate—It was refreshing to witness the effect of this blooming spot, surrounded by the dreary waste—it could only be compared to the effect on the famished caravan, when traversing the blowing sands of Arabia, he descries in the horizon the lonely palm tree, marking the scite of a solitary spring of water.

I have troubled you with this communication, chiefly with a view, of suggesting to you, and to your subscribers, one alteration in your terms of subscription, and that is—instead of the seeds you promise to send them, or, I would rather say, in addition to them, that you add a Retort to your establishment, and promise on the receipt of every annual subscription, together with a portion of their soil, *always post paid*, that you will analyze it, and in the succeeding number of your paper, give them the composition of their soil, and the appropriate materials for resuscitating in the most effectual way, their worn out old fields. Any farmer who through this channel shall have become possessed of the proper informatian, and will put it in practice, so as to reclaim one acre of ground in a scientific way, may well afford to pay the annual subscription to your paper, all the days of his life. A.

[We thank our correspondent for his excellent contribution, and readily accept his proposed amendment to our terms. It is quite within our power to have soils analyzed, and we will most cheerfully have it accomplished for any subscriber who will take the small trouble to send us a sample as proposed.—*Editor.*]

Rarely drink but when thou art dry; the smaller the drink the clearer the head, and the colder the blood; which are great benefits in temper and business.

From Hayward's Science of Agriculture.

ON HAYMAKING.

Having observed that in a season when there was no rain whatever, and the hay had been made with rapidity, and carted within a short time after it had been cut, that a greater quantity was destroyed and injured, by being over-heated and burnt, than in a catching irregular season; that when hay had not heated in the stack it was frequently mouldy; that as hay lost its native green color and approached a brown, it lost its nutritive qualities; and that altogether, the making of hay, as usually conducted, was a very precarious and teasing operation: I determined on trying to arrange a system on some more regular and certain principles, in which I succeeded; and by adopting a certain and regular course of operations, was enabled to make my hay of a uniform good quality; and, let the weather be as it might, at a regular expense of labor. And considering such a process not only of importance, as it ensures a more perfect quality; but as it affords a more certain protection against the injuries usually consequent on the uncertainty of the weather, and over-heating in the stack; and that it thus removes two great causes of anxiety, it may be well worth the public attention.

In the first place, as to the state of the weather, it generally happens at this season of the year that there are three or four days rain and three or four days dry; therefore, on beginning to cut the grass, as it is well known that during wet weather grass may be cut, and suffered to remain in the swarth for several days without injury; and it being desirable, where hands are plenty, to have a good quantity, or so much as will complete a stack in a day, in the same state of forwardness; I should prefer beginning to cut during the rainy weather: however, be this as it may, the swards should not be opened but on a certain fine day; and when this is done, the grass should be well shaken apart and equally spread over the ground. As soon as the upper surface is dry, turn it well over; and in this operation, great care should be taken to open and spread any cocks that may not have been divided in the first opening. This being done, commence raking into wind-rows, in time that the whole may be made into small cocks before night. *The second day these cocks must remain untouched; let the weather be wet or dry:* the third day, if the weather be certain and fine, throw the cocks open; but if the weather be wet or threatening, they may remain another day, or until the weather is certain to be fine for the day. The cocks should then be thrown, according to the crop, into beds of two or three rows; and after three or four hours' exposure, turned over; and taking time to gather the whole into wind-rows and cocks before night, let this operation commence accordingly, *and none be left open:* the day after this, which in fine weather will be the fourth; *the cocks must again remain untouched, or not be opened, whether the weather be wet or dry.* On the fifth, or the next day, these cocks will only require to be opened for an hour or two, when they will be fit for the stack. The novelty of this mode consists only in suffering the hay to remain in the cock the second and third, or alternate days; and at first sight it may appear that so much time in fine weather must be lost, but

this is not the case. Whilst the hay remains in cocks, a slight fermentation, or what is termed sweating, will take place; and in consequence, after it has been opened on the third and fifth days, it will prove to be just as forward as if it had been worked every day. And the advantages resulting from this, are obviously the following: by shortening the time of open exposure, the color of the hay is more perfectly preserved, and consequently the quality; and the fermentations, or sweating, which take place in the cocks, prove so much to have diminished that principle, or inclination, as to prevent its heating injuriously in the stack; and the whole operation of making, whether it takes four days or eight, requires three days labor only; and the hay being left in that state every night, in which it is the least possibly exposed to the injuries of the weather, and in which it may remain for a day or two in uncertain weather, without injurious exposure; much painful anxiety, and useless attendance of laborers, are obviated.

From the Farmer's Assistant.

PUMPKIN.—A new, and very large species of the pumpkin has lately been cultivated in this part of the country, which promises to be very profitable for cultivation, if it can be naturalised to our climate. At present, it requires early planting, in order to ripen it. Upwards of five hundred pounds of this pumpkin may be readily raised from one seed.

Allowing even every square rod of ground planted with it to yield this amount, the product of an acre would be forty tons; a greater and more valuable product, for the purpose of feeding and fating cattle, during the fall, and beginning of winter, than can be raised, from the same ground, of any kind of cabbage, or root whatever; at the same time, it can be raised with not more than half the trouble and expense, to the acre, which the raising of cabbages and roots require. Time, however, must test the value of this new plant, which, from present appearances, bids fair to be a great acquisition to the country.

Pumpkins are, probably nearly, or quite as valuable as the same weight of most kinds of roots, for the purpose of feeding milch cows, and fating cattle; and as they are easily raised, and still easier gathered, it would seem that raising even the common kind might be made profitable.

In raising a crop, the hills should probably stand about seven feet apart; and though the crop would require as much ploughing as other hoed crops, yet the expense of hoeing would be but trifling.

The crop would not be half so expensive to raise and gather, as a crop of Indian corn; it would exhaust the soil but little; and it would be a fine preparative for wheat, as the ground could be cleared of the crop sufficiently early for sowing that grain.

It is believed that an acre, properly cultivated, would yield as much as ten tons of even the common kind of pumpkin; and that these would be found worth as much as sixteen cents per hundred, for the purpose of feeding and fating cattle.

If these estimates are correct, it would seem that a crop of pumpkins, even of the kind last mentioned, would be found as profitable, and as suitable to precede a crop of wheat, as the turnip crop is found to be in some parts of Great Britain.

This would seem to be a matter well worth the attention of the farmer: If he can realize such profits from those grounds, upon which he usually bestows a kind of Summer-fallowing for wheat, he will derive a handsome profit where at present he has none; and he would probably find his ground in better order in the fall, for sowing his wheat, than by the slight culture of fallowing, which is usually given to the soil for raising that crop.

In this case, however, the ground should be broke up in the latter end of the Fall preceding, and cross-ploughed just before planting the crop; which should be planted early, in order to be sooner out of the way for sowing the wheat in the Fall.

The pumpkin crop would require two ploughings, and two hoeings, while growing, more than is usually given to land when Summer-fallowed the usual way. By breaking up the ground in the Fall preceding, the loss of some spring-pasture would also be incurred.

Let us now compute the expense of raising and gathering an acre of pumpkins; and then the clear profits of the crop will more readily appear.

CROP, DR.	*Dols.*	*Cts.*
For planting, half a day's labor,		50
Two ploughings, half a day's labor each time, with one horse and plough,	2	00
Two hoeings, one day's labor,	1	00
Gathering, one day's labor, with horses and wagon	2	50
Clearing the ground of the vines, half a day's labor		50
Seed		25
Loss of Spring-pasture	1	00
Rent of the ground	3	00
	$10	75

CR.	*Dols.*	*Cts.*
By ten tons of pumpkins, at 16 cts. per hundred,	32	00
Clear profits of the crop	21	25

Suppose it would be found necessary to expend three dollars more, in manuring for the crop, in the hills, before planting, in order to raise the quantity above stated; there would then remain eighteen dollars and twenty-five cents of clear profit to the acre; an amount of profit which farmers in this country do but seldom realize.

If the above calculations should be found correct; and this can be easily ascertained by experiment; let the farmer pursue this system of culture, by having his pumpkin-crop to precede his crop of wheat, instead of the present method of summer-fallowing; let him apply his pumpkins to feeding and fating of cattle; and in this way he will find that his ten-acre field will give him one hundred and eighty dollars, of clear profit, more than he derives from it by his present mode of culture, in raising his crop of wheat. And, this calculation being founded on what it is supposed may be derived from the common pumpkin, it is only necessary to add, that, if the kind first mentioned should answer the expectations formed of it, the clear profits it will afford will probably be three or fourfold greater.

It is believed that pumpkins are considerably improved, as an article of food, for fating of swine particularly, by being steamboiled; and perhaps the same may be observed of them, when used for fating neat-cattle.

As they contain a large portion of saccharine matter, they would, no doubt, afford considerable of molasses, or of ardent spirits, when distilled. It is, most probably, their highly saccharine quality which gives them a superiority for the purpose of fating.

Pumpkins will grow well on every kind of soil that is fit for hoed crops, and the richer the better. In raising them, it is usual to mix them with the crop of Indian corn: But it is doubtful whether any thing is ever gained by raising two growing crops together. Let the crop be planted by itself; and in planting give the hills plenty of seeds, in order that if some of the young plants should be destroyed by insects there might still be enough left.

Pumpkins are excellent for fating Horses. They, however, do not relish them at first; and therefore must be kept from feeding, till they are hungry, before the pumpkins are offered to them; and let a little salt be first sprinkled on this food; when they will soon grow fond of it, and eat it readily, without salt.

Pumpkins may be kept in a cellar, for this purpose, a considerable part of the winter; but the cellar must not be too warm; and care must be taken not to break off the stems of pumpkins, but leave these attached to them; otherwise, they will soon commence rotting, at the places where the stems are broken off.

THRESHING MACHINES.

Within a few years these instruments have come into use in this section of the country, and they have in a great measure superseded the old mode of threshing by the flail or with horses. They have their advantages and their disadvantages, but are upon the whole a useful instrument. I have seen tried a variety of different kinds, but the farmers have settled down to the use of two kinds—one invented here and called "the Vosburgh machine," for which a patent has been obtained, but is nevertheless a good machine—and the other is "Allen's patent threshing machine." Vosburgh's is a cylinder, working horizontally over a concave, and in both are teeth; the horse power is fixed and permanent. Allen's is likewise a cylinder and concave, and both are likewise armed with teeth. The teeth are so set that in the turning of the cylinder, they pass between those in the concave, and the straw with the grain in, is shoved in between them and carried through by the motion of the cylinder; the grain is thus separated from the straw. The cylinder is much smaller than Vosburgh's—the horse power is differently constructed and portable, so that the machine, when in use, is only slightly fastened to the barn floor. It may, together with the horse power, be carried from barn to barn. The cost of a machine requiring the power of two horses to use it, is from $70 to $80, finished and complete for threshing. For those requiring one horse power, the price is less, and for those requiring the strength of three horses, the price is proportionately increased.

Both of the machines above spoken of do their business well and with dispatch, but the preference is generally given to Allen's. It is certainly an excellent instrument, and is extensively used. It threshes quick and clean, and I think it pro-

mises to be durable. I found that my men would thresh out 100 sheaves with it in from 10 to 15 minutes, and remove the straw; but the machine was stopped when the 100 sheaves were threshed, to clean up the floor and to throw more from the mow. This last operation took up as much time as the threshing. With a sufficiency of hands and a relief of horses, I think from 1500 to 2000 sheaves of wheat or oats might be threshed during a day, and not hurry much—but in any event, hurry or not, the grain would be threshed clean; if there was loss it would be in the carelessness of the men, in not raking out the straw carefully. If the machine is not too much hurried, the work is not hard for two horses, as mine seldom sweat; but they were always rested at the end of threshing 100 sheaves. There can be no complaint that the machine does not work fast enough. The greatest labour is to remove and house the straw. To thresh off your grain as quick as you are enabled to, is one of the disadvantages of a machine; the straw is in a measure wasted, scattered and lost, and the farmer finds that he is minus at the end of the year several loads of manure. By slow threshing this is avoided; then it is gradually thrown into the barnyard, becomes soaked with offals, and trod under foot by the cattle—the consequence is a good rich bed of manure at the end of the year. It is not so when the crop is threshed off at once in the fall. The large quantity of straw collected in heaps round the barn is too often suffered to remain as it is thrown out, and becomes rotten straw but not good manure. If some better plan of managing the straw to convert it into manure is not adopted, the introduction of threshing machines will ultimately be an injury.

Another disadvantage in the use of the threshing machine is, that cattle do not eat the straw as readily as when the grain is threshed out by the tread of horses: the machine beats off the blade and leaves the straw hard and stiff, and it is only when they can get nothing else that they will touch it. The farmer can obviate the difficulty of wasting his straw from threshing his grain at once, by mowing it or scattering it carefully in his yard, and perhaps he can the second by sprinkling it with salt, so that the cattle would eat it readily. These two objections overcome, and the threshing machine is all that we could reasonably desire it. There is a great advantage in being enabled to get your grain to market in a short time, you can commonly obtain the highest price for it; and this to a farmer is an important consideration. For the last six years I have taken as accurate a note of this loss as possible, as in that time I have sometimes had a machine and sometimes not. My estimate would be 75 cents an acre for the size of my farm: at least it has operated so with me, and the loss has been, that when I have threshed my grain in the ordinary way, the process was so slow that it was never ready for sale at the proper time, and sometimes, which is always bad policy, had to be kept over. The saving of time, to a farmer, is a great consideration, and is one of the great benefits he derives from the use of this instrument. When the Spring comes he is then ready for the labor of the season; his old crop is entirely out of the way, and he can devote his whole time, towards the attainment of another; besides, during the winter, from the time gained by the use of the threshing machine, he has collected all the materials for his fencing and firewood, done off all his chares, and his necessary visiting, so that during the summer season he can with ease keep ahead of his work, and have every thing done in due season—the gain in this way is at least equal to the gain in the increased price for the grain sold, so that he is twice paid for the cost of the threshing machine. Such a man requires to hire less during the season and makes a saving that way, while at the same time he keeps his farm in the best possible order.—The life of the farmer is at best a busy one, but when he gets behind his work, it is very slavish and unpleasant. So much for the advantages and disadvantages of the Threshing Machine; but we will sum up and say it is upon the whole a decided improvement. *Columb. Sent.*

Tobacco.—It is worthy of notice, and highly interesting to the growers of Tobacco, that many of them, who make this article of a leafy and good quality, should know how to assort it so that they may be paid for their labour. I am informed by a dealer of Baltimore, from whom I have just bought some ground leaf Tobacco at $30 per hundred—which price I believe is the highest ever known to have been paid for second tobacco raised in Maryland—that much more of this kind could be had, if the planters knew the kind, and would select it properly. I do hope that this information may induce those who have such tobacco, to obtain such instructions before stripping as will enable them to select the kind wanted, and by so doing to reap the just reward for their labour, and finally encourage the growth and consumption of this article within the United States, which is much wanted and frequently sought after as a substitute for the imported Spanish wrappery.

Editors of papers friendly to agriculture will please insert the above.—*Balt. Amer.* A. C.

We profess to be friendly to Agriculture, and therefore cheerfully copy the above, and will venture to add a request, that some gentleman who is competent to the task will send us for publication the instructions required. We will with much pleasure give them all the currency we can.

Tame Bees.—That bees may be so tamed as not to hurt persons to whom they are accustomed, I have, by many instances, heard exemplified, but most remarkably in the following account: A gentleman residing at Berry, St. Edmunds, could do with impunity any thing he liked with his bees; he knew every one of them; could distinguish each bee from his fellow, as a shepherd is said to individualize his sheep by the physiognomy of each; and, if he wanted to show a particular bee to a friend, he would have the hive to which it belonged turned out into a cloth, roll the insects about with his hands, like so many peas, and unharmed, select from them the one required! This feat he has often been seen to perform.

Two things fill my mind with ever new and increasing admiration and veneration; the oftener and more constantly they occupy my thoughts—the starry heaven above me, and the moral law within me.

THE GARDENER.

A Chapter on Gardening.

(Continued from page 4.)

In selecting a garden spot the first consideration should be exposure; my own impression is, that a south-west exposure, protected by compact paling, or buildings, from the N. E., North, or N. W. winds, is the most favorable both for early and late gardening, more especially when the ground gradually slopes from the north toward the south. The soil, although an important consideration, is of secondary consequence only, because, by a proper application of manures, any soil, however sterile, can be made kind and productive—So much by way of introduction—now for practical remarks—And first—

Preparation of the Ground.—As soon as the weather will permit, spade your garden up as deep as possible, (I generally go about 16 inches)—let every spadefull thrown up be well pulverised; then dress the whole with a compost of ashes, well rotted stable manure, and the scrapings from your wood yard; let the ground remain in that state for some days to mellow, and then you may commence operations—and do so by working up each bed as you have occasion to plant or sow in it. The first crop usually planted in the spring is

Potatoes—I must confess that my predilection is in favour of late fall planting for a spring crop—I have now in my garden a bed of potatoes, the mercer, and the old English red, in blossom; they were planted on the 18th of December last. I have also potatoes planted early this spring; they came up as soon as the others, but there is no comparison in the growth of each, or their capability of withstanding frost. Those planted in December are vigorous, flourishing, and in blossom; that planted this spring do not evince the same hardy properties; they have not thrived so well, and have been more affected by the late sudden changes of temperature. The course pursued in planting was as follows—the ground well spaded, and covered with long stable manure, potatoes sliced and planted in rows of one foot distance from each other—and in the row one foot apart, making a square of four feet—they were then covered with wheat chaff to the depth of two inches, on that straw about one inch, and then two inches of rich mould, the whole covered with earth obtained by *trenching* about a foot deep *round* the *bed*—and I cultivate only with a small hoe to keep them free of grass and weeds. I intend to keep an exact account of the produce of this bed, and will furnish you with the result. Some persons plant potatoes whole, others cut them; a potatoe may be divided into as many pieces as there are eyes, but the pieces so divided should be rolled in plaster. Plaster answers a double purpose; it acts as a stiptic and prevents bleeding, or exhaustion, and it also is a defence against the attacks of insects—An important thing in the culture of the potatoe is to keep the soil light, and it can only be effected by the use of straw or hay—put well rotted manure beneath, and straw, hay or chaff on top, to keep the soil light, and nine times out of ten you will have, not only abundant crops, but of the first quality.

(*To be Continued.*) M.

From the American Gardener's Calendar.

Sowing Melons and Cucumbers, in the open Ground.—About the tenth of this month will be a good time, in the middle states, to sow a general crop of Melons, in the open ground; from a week to a month earlier, to the southward, according to the respective situations; and between the fifteenth and twentieth, in the eastern states. It is remarked that musk and water melons, cucumbers, pumpkins, squashes, gourds, and all the varieties of these families, may be sown, at the periods in which people *generally* plant Indian corn; but in order to have them as early as possible in the open ground, a few patches may be sown ten days or more, before the dates above mentioned; which with good care may succeed very well, especially if the season proves favorable.

For the varieties of the musk or Cantaleupe Melons, prepare a piece of rich sandy ground, well exposed to the sun; manure it and give it a good digging, then mark it out into squares of six feet every way; at the angle of every square, dig a hole twelve inches deep and eighteen over, into which put seven or eight inches deep, of old hot-bed dung; or very rotten manure; throw thereon about four inches of earth, and mix the dung and earth well with the spade, after which, draw the remainder of the earth, over the mixture so as to form a round hill, about a foot broad at top. Some people use hot stable dung, under the idea that its heat would promote the vegetation of the seed; this is a mistaken notion, as in a few hours it loses all it had, for want of sufficient quantity being together, to promote fermentation, and becomes a dryish wisp, unfit, at least, for the present, to afford either heat or nourishment to the plants.

When your hills are all prepared as above, plant in each, towards the centre, eight or nine grains of good melon seed, distant two inches from one another, and cover them about half an inch deep.

When the plants are up and in a state of forwardness, producing their rough leaves, they must be thinned to two or three in each hill; the extra number in some, may serve to fill up deficiences in others: draw earth, from time to time, round the hills, and as high about the roots of the plants as the seed leaves; when fit, stop them as is directed in page 122; after which, keep the ground, by frequent hoeings, perfectly free from weeds.

Squashes.—Squashes of every kind, may be cultivated as directed for cucumbers and melons, should be sown at the same time, and at similar distances; with this difference, that two plants of these, will be plenty for each hill, and that they are easier pleased in soil, and preparation, than the others.

Water Melons.—In order to have water melons in good perfection, you must fix upon a piece of very light, rich, sandy soil; prepare, sow, and manage it, in every respect, as directed for cucumbers and melons, only let the hills be nine or ten feet distant every way.

Pumpkins and Gourds—Pumpkins will require to be ten feet distant hill from hill, two or three plants will be sufficient in each, they are not so tenacious of a particular soil as either melons or cucumbers, but will grow freely in any dry and tolerably rich ground; they are to be sown at the same time as directed for sowing melons and cucumbers in the open ground; and should be kept constantly clean and free from weeds.

The various kinds of gourds which are more cultivated for ornament than use, may be sown where they can be trained to trellises, fences, walls, or to cover arbours.

When you intend to cultivate either melons, cucumbers, squashes, pumpkins, or the like kinds, on a large or extensive scale, you can prepare the ground with a plough, which will save much labour; and also, afterwards, as the weeds advance, plough and harrow, between the plants till they begin to run, after which, the hoe must be used.

Farmers' Gardens.—My caption may startle such as have been content the greater part of their lives with salt pork and potatoes, with the addition now and then of a few greens from the field, or a little lettuce. If the perusal of this article shall be the means of reducing the number of this description of farmers, my end will be answered. I know of no class of citizens that would suffer by the change, except the physicians.

It is amusing to see with what avidity our settlers from the land of steady habits, will, as soon as vegetation springs, search for the dandelion; and yet these men consider it lost time to devote a few hours in each week to preparing, planting, and tending a garden, that would half support their families, and save many a physician's bill.

It is a duty which each farmer owes his family, and not only so, but his interest, to provide them with a variety of vegetables for the table. It adds not only to their health, but to their comfort, and greatly reduces the consumption of animal food. It is also a duty he owes his sons, to employ their every leisure hour in the garden, to instruct them in the cultivation of the different vegetables, and at the same time to impress on their minds the important truths, that every hour should be profitably employed; and that a man's garden is a pretty good index of his mind. When I see a garden well fenced and well cultivated, I draw the conclusion that the owner is a man of taste, and of good feeling.

But some may say, "I cannot attend to a garden without neglecting my farm." I appeal to such, whether there are not many hours in the course of a week, that might be spent in the garden, without any neglect of the farm. Our teams must have time to rest and feed, and we often finish a job an hour or two before night, when it would be unprofitable to begin a new one; then say—now boys, let us go into the garden.

Instead of hunting in the fields, on the opening of spring, for a few greens, to be able to go into the garden and gather a mess of spinnage, asparagus or lettuce—or when the season is a little advanced, a mess of early peas, string beans, early beets, squashes, and a variety of other summer vegetables, must surely afford gratification to the farmer. But when in addition to these, he has in autumn buried in sand in his cellar, a sufficient supply of parsnips, carrots, salsify, beets and cabbage for the consumption of his family through the winter, with a cart load of Rhode Island crooknecks secured in a dry place, he surely may take more comfort than he could with potatoes alone, even if the latter were the beet kidney or pink eye.

If he have all these good things, he will not be satisfied until he has set out a long row of currant bushes, and two or three Isabella grape vines; nor till he has yielded to the solicitation of his wife and daughters to have a piece of well prepared ground assigned them for parsley, sage, &c. with a few roses and other embellishments, suited to their delightful taste.

THE BREEDER & MANAGER.

From the [London] Lancet, for 1831—'32.

Introductory Lecture on Veterinary Medicine and Surgery:—*By Mr. Youatt—delivered at the University of London, Wednesday, October* 5, 1831.

(Concluded from page 15.)

Why does comparative anatomy form an essential branch of medical study? That by observing the different apparatus by which the same function is discharged in different animals, always in benevolent and wise accordance with the situation and the destiny of each, and the perfection of the function in each, at least so far as the enjoyment of the animal and the accomplishment of his destiny are concerned, the student may acquire a more enlarged and accurate conception of the nature of each function, and its connexion with structure and situation and enjoyment, and may better appreciate its healthy state, and derive many useful hints as to the cause or remedy of disease.

In the study of veterinary medicine, our attention is directed to a subject even more interesting and important—the influence of difference of structure and function on disease. It is comparative anatomy made to bear upon pathology. It is comparative anatomy brought home to practice.

When in the animals that come oftenest under our notice, and whose maladies we may watch from their commencement to their termination, we find immunity from certain diseases in some, maladies peculiar to others, and the same disease strangely varying its character in different animals, and varying too in the same animal, according to the kind of food, the system of management, the season of the year, the state of the constitution, and particularly, and in the most marked degree, with reference to *condition*—that artificial and unnatural state into which the animal is too often brought,—it is impossible that we can ponder on these things, without many a useful hint of practice. Comparative anatomy is now deservedly admitted to be a useful branch of medical education, from the enlarged conception it gives us of healthy function; let me not be charged with presumption if I venture to predict, that the time will come, when comparative pathology will be considered as essential, and be found even more useful.

The medical student may derive valuable knowledge, or he may be led far astray in the effect of drugs on different animals, and their supposed efficacy on man, accordingly as he takes into account or neglects the peculiarity of structure and function, and the character of disease in each. No conclusion should be hastily drawn from the

effect of a certain medicine on any animal in health or disease, as to its effect on other animals, much less on the human being. It is an old adage, that "one man's meat may be another man's poison," and there are in our pastures few plants which, although generally innocuous, are not occasionally injurious to some particular animal; and there is no plant, generally poisonous, which is not eaten with impunity by some quadruped. So in the treatment of disease, the same drug may be the bane or the antidote, according to the nature of the animal to which it is administered. Our lectures will be full of illustrations of this. The medical pupil may hence derive instruction as to the manner in which he is to pursue his experiments on drugs and poisons, and caution as to the conclusions he is to draw from his experiments. I will not say that no dependence is to be placed on the effect of certain drugs in an inferior animal, with reference to their probable effect on the human being, but I will affirm that the majority of these experiments are inconclusive, and therefore useless and cruel. The stomach and intestines of the dog, are, generally speaking, similarly affected with those of the human being, by many drugs; yet we can scarcely destroy him with opium, or purge him with julep or aloes.

The medical student may derive a few other not unprofitable lessons in our humbler school. He will learn the paramount importance of an attention to minute symptoms. The human practitioner has many auxiliaries in the detection of disease, and its changes and combinations; and especially he can obtain from his patients an account of the seat, and kind, and degree of inconvenience or pain; its increase or diminution, its constancy or intermittance.

In the majority of cases, the veterinarian has nothing to guide him but the eye and feeling; and even there, from the structure of his patients, he is deprived of much information which the human surgeon obtains, for the skin seldom changes its hue; and the countenance is comparatively devoid of expression. He has far fewer symptoms to guide him through the intricacies of many a case. Then he must make up for this by the quickness with which he catches these few—by the tact with which he appreciates their real character and frequent changes—by the accuracy with which he classes them, and compares them, and founds his diagnosis upon them. He must be a perfect adept in symptomatology; he must possess the faculty which is, of all others, most valuable in a medical man, that of forming, from his own observation, and led not astray by the surmises and false conclusions of others, and even of the student himself, a speedy and just appreciation of the actual state of his patient, the disease, its seat, its extent, its combinations, its accessories, its consequences.

He may likewise learn the importance of prompt and decisive treatment of disease. The owner can seldom afford to let his horse lie idle; or the animal may not be of sufficient value to warrant the surgeon in running up a long bill. We must have no placebos; no medulla panis, and powder of post. Having carefully studied the character of the disease, we must attack it at once energetically and decisively. I do not mean that we should proceed rashly or brutally, or that one step should be taken which calm consideration and long experience would not justify; but we must go to work at once and in good earnest. I will tell you what is the result of this, and the invaluable lesson which may be imprinted on the mind of the student, that, anxious attention to the symptoms being premised; an accurate judgment of the case being formed, a separation being made between that which is essential and that which is merely secondary and fortuitous, we rarely repent the most active treatment. We do often repent half-measures and vaccillating conduct, but rarely or never bold and straight-forward practice.

Connected with this, and another lesson of no mean value, is the habit of systematically attacking the disease, and not merely some of its symptoms. The total eradication of the complaint, and not merely a palliative of some of the circumstances attending it, is the object at which we are compelled to aim; for it would be of little service to abate inflammation of the eye while we left such defect of vision that the horse became a starter, and endangered the neck of his rider, and it would add little to our reputation, that we cured inflammation of the lungs, if the animal remained thick or broken-winded.

To what extent our prompt and decisive treatment might be adopted in human practice I have not the presumption to attempt to describe; but of this I am sure, that, so far as the safety of the patient will permit, and all personal considerations and scruples and fears being put quite out of the question, there is not a surer character of a skilful and honest practitioner than the straight-forward use of the means he possesses to alleviate or remove disease.

Gentlemen, appearing for the first time before you as a recognised teacher in the medical school of this University, my observations have necessarily been confined to the connexion between veterinary and medical science; otherwise I might have shown the importance of these lectures as a portion of general science, and as connected with agriculture; as unfolding those principles on which a judgment of the exterior of horses and cattle depends; their beauty; their general utility; their adaptation to particular purposes; the proper management of them, and the enjoyment of profit we may derive from them. These will be points that I shall never lose sight of; all my descriptions of structure or disease will have this as their grand aim and object.

I have addressed myself to-day to the medical student; but I am free to confess, that my lectures will be equally, or indeed more anxiously, composed for other classes; the veterinary pupil and the possessor of horses and cattle; that the one may be prepared for the exercise of his profession, and the other for the management and enjoyment of his agricultural property. So far I may be considered as occupying a kind of border ground between the two schools, and I must endeavor to accomplish the difficult task of adapting myself to the character of each; to render my lectures sufficiently scientific to satisfy the veterinary and medical student, yet not so abstruse or intricate as to cease to interest the general inquirer.

I am painfully sensible of the extent as well as difficulty of that which I have undertaken. While nine professors, of whom as a collective body this University and the medical world may be well proud, unite their labors in unfolding the principles of human medicine, on one poor individual is thrown the task of teaching those of veterinary practice. Well, I must apply myself in good earnest to my work. A sense of its extent and importance must stimulate and not depress; zeal and industry must supply the place of other requisites, and, perhaps, at some future period, and the sooner the better for the interests of science, and I do trust of this Institution too, other and abler men may be permitted to unite with me in demonstrating, that in the importance of its object, and its connexion with science—*Ars veterinaria, post medicinam, secunda est.*

MISCELLANEOUS.

To the Public.—The undersigned having been appointed GEOLOGIST to the state of Maryland, deems it advisable to make known to his fellow citizens the duties which under such appointment he is required to perform, and to inform them of his readiness to satisfy their inquiries, as well as of the most convenient mode in which their application to him may be made.

It is the duty of the Geologist "to make a complete and minute geological survey of the state, commencing with that portion which belongs to the Tertiary order of geological formation, and with the southern division thereof, and progressing regularly with the course of the waters of the Potomac and Chesapeake through that region, and thence through the other subdivisions of the state with as much expedition and despatch as may be consistent with minuteness and accuracy, and he shall prepare and lay before the legislature at the commencement of every session a detailed account of all remarkable discoveries made, and the progress of the work."

It shall further be his duty, "at those seasons not suited to the active prosecution of the geological survey, to analyze and ascertain the qualities and properties of all specimens of mineral substances or soils left at his office or residence, for that purpose, by any citizen of the State, and taken from any portion of the territory of the state."

In pursuance of those duties, the undersigned is about to proceed immediately to the E. Shore of Maryland, where he will remain until the end of June; after which he will visit the counties lying between the Patuxent and Potomac rivers, proposing to make his examination of this portion of the state during the months of July and August. His cabinet duties cannot therefore be commenced before the month of September. Desirous, however, that no avoidable delay should be experienced by such of his fellow citizens as are interested in the subject of his investigations, the undersigned has made arrangements with Mr. Philip T. Tyson, of the firm of Tyson and Fisher, No. 192 Baltimore street, to receive during his absence the specimens of mineral substances, soils, waters, &c. which may be submitted. Any information concerning these, not requiring to be determined on an elaborate investigation or analysis, will be furnished by Mr. Tyson; further information will

be communicated by the undersigned himself at the earliest convenience.

J. T. DUCATEL,
14, Lexington street, Baltimore.

The Locusts—whose appearance, at the regular period of seventeen years, is expected in the course of the present month, are frequently confounded with the migratory locusts which appear in such prodigious swarms in eastern countries, and commit such desolating ravages upon vegetation. The American locust does not appear in any numbers at all comparable to the Asiatic and African locust, nor is it in any way injurious to vegetation, except in the deposite of the eggs.

The migratory locust is one of the most formidable instruments of destruction which afflict the eastern countries. The appearance of a swarm is a precursor of famine and pestilence. In a few hours they destroy the entire vegetation of provinces, and the immense number of their dead generates horrid diseases. They darken the whole air, and cover the ground with inconceivable multitudes. In Barrow's travels in Southern Africa, he states that the surface of the ground was completely covered with them for *two thousand square miles*, and the water of a wide river was scarcely visible on account of the carcasses of the dead.

In Kay's "Travels and Researches in Caffraria," published a day or two since, by the Harpers, of N.York, an account is given (pp. 374 '5) of immense swarms of locusts which visited Southern Africa in 1828. He describes their first appearance on the wing "like a black cloud at a distance, but when they arrive, the density of the host intercepts the solar rays, occasioning an awful gloom like that of an eclipse, and a noise like the rushing of a torrent." A single flight covered the face of the country for miles every way. They are described as devouring every green thing of herbage and the vegetable kind, excepting peas and French beans, weighing down the trees, and leaving not a leaf, a blade of grass, or an ear of corn in the province.

The locusts were soon after attacked by a swarm of their enemies, the locust-bird, a sort of migratory thrush, only to be found where the locusts are. They also darkened the air with their prodigious multitudes, and fell voraciously on the *larvæ* and young locusts.

The Bushmen at the Cape of Good Hope lay up a kind of winter store of food from the locusts. They take of the legs and wings, roast the bodies, and reduce them to powder, which they preserve in bags as we do flour.—*Amer.*

Baron Hagel, the Austrian botanist, who lately visited the Neilgherry Hill, in India, declares that the unknown varieties of trees and shrubs, existing there alone, exceeded 10,000. The wild rose runs up to the top of the highest trees, and grows to the thickness of four or five inches. A delicious specimen of orange, but not exceeding a filbert in size, is also found there. In the orange valley below Kotaherry, about 4500 feet above the level of the sea, numerous fruit trees are found, amongst which are the wild fig and lemon tree; the latter bearing fruit little inferior in size and flavor to that of Spain.

Death of a Child occasioned by a Cat.—A friend intimately acquainted with the facts, and whose statement may be relied on, informs us that a few days since an infant only six months old, was killed by a cat having sucked its blood from the nose of the child while asleep in the cradle. The child was found with the blood at its nose, warm, but lifeless. The cat remained in the cradle with its mouth and nose immersed in blood, and so gorged as to be unable to leave the place. A medical examination took place, and the result was, from the loss of blood by the child,—and the great quantity found in the cat, which was killed, that the life of the child was taken by the cat.—*N. Y. Gaz.*

To take Ink out of Mahogany.—It is perhaps not generally known that a piece of blotting paper, crumbled together to make it firm, and just wetted, will take ink out of mahogany. Rub the spot hard with the wetted paper, when it instantly disappears; and the white mark from the operation may be immediately removed by rubbing the table with a cloth.

Retirement.—"There are minds," says Jefferson, "which can be pleased by honors and preferments: but I see nothing in them but envy and enmity. It is only necessary to possess them to know how little they contribute to happiness. I had rather be shut up in a very modest cottage, with my books, my family and a few old friends, dining on simple bacon, and letting the world roll on as it likes, than to occupy the most splendid post which human power can give."

Manner of making Castor Oil very palatable to Children.—Take the quantity of oil you purpose for the dose, and boil it for a few minutes in an equal quantity of milk; then sweeten it with a little sugar. When the mixture has cooled, stir it well, and give it to the child. There will be no necessity of giving the child any thing to drink after taking the mixture, for the taste of it is more pleasant than any drink you can give.

Curious Fact.—The Shaddock contains generally thirty-two seeds, two of which only will reproduce Shaddocks; and these two it is impossible to distinguish; the rest will yield some sweet oranges, others bitter ones, others again forbidden fruit, and in short all the varieties of the orange, but until the trees are actually in bearing, no one can guess what the fruit is likely to prove; and even then the seeds which produce shaddocks, although taken from a tree remarkable for the excellence of its fruits, will frequently yield only such as are scarcely eatable.—*Lewis's Journal.*

A wag the other day remarked, that the project of loaning "the *credit of the State* to the *People* thereof," was something like a man trying to raise himself from the ground by pulling at the waistband of his own breeches.

Wise men mingle innocent mirth with their cares, as an help either to forget them or overcome them; but to be *intemperate* for the ease of one's mind, is to cure melancholy with madness.

Great Haul of Great Fish.—On Thursday, some Fishermen at Carpenter's Point, Cecil county, took at a single haul, upwards of 800 Rock Fish, of the largest sive we ever saw.—Some of them weighed upwards of 100 pounds, and the most of them averaged between 50 and 100 lbs. There were selling yesterday morning in Market, at from 50 cents to one dollar for the largest, say *one cent* a pound for such fish as this!

Another Haul.—On or about the middle of last month, at Greenway Landing, (fourteen miles below town,) occupied by Messrs. George H. Smoot and Charles Cooley, *one million five hundred thousand Herrings*, and *eleven to twelve hundred Shad*, were caught at a single haul of the seine. Again, on the 28th inst. *eleven thousand Shad* were caught at a single haul of the seine, at the same landing.—*Alex. Gaz.*

Living without Food.——Animals support want much longer than is generally believed. A civet cat has lived ten days without food, an antelope twenty, and a very large wild cat also twenty; an eagle has survived twenty-two days, a badger one month, and several dogs thirty-six days. In the Memoirs of the Academy of Sciences, there is an account of a slut which, having been shut up alone in a counting house, existed forty days without any other nourishment than the stuff on the wool of a matrass, which she had torn to pieces. A crocodile will live two months without food, a scorpion three, a bear six, a chamelon eight, and a viper ten. Valliant had a spider that lived nearly a year without food, and was so far from being weakened, that it immediately killed another large spider equally vigorous, but not so hungry, which was put along with it. The celebrated John Hunter inclosed a toad between two stone flower pots,and found it as lively as ever after fourteen months. Land tortoises have lived without food for eighteen months, and a beetle is known to have been kept in a state of perfect abstinence for three years, when it contrived to make its escape. There is also a well authenticated account of two serpents living in a bottle without any food for five years.

The best born, and the first born, are oftentimes the worst, and the least to be borne.

To bespeak praise is forever to be disappointed of it: to fear it is to deserve it; and to turn one's back upon it, is to be sure to have it follow.

A fashionable lady is a rose, from which every lover plucks a leaf; the thorns are left for the future husband.

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BALTIMORE PRODUCE MARKET.

☞ *These Prices are carefully corrected every* WEDNESDAY.

	PER.	FROM	TO
BRANDY, APPLE,	gallon.	$0 27	$—
PEACH	"	75	—
BEANS, white field,	bushel.	1 50	1 75
BEEF, on the hoof,	100lbs.	6 50	7 00
CORN, yellow,	bushel.	58	—
White,	"	58	60
COTTON, Virginia,	pound.	10	12
North Carolina,	"	11	12½
Upland,	"	11	14
FEATHERS,	pound.	36	37
FLAXSEED,	bushel.	1 00	1 25
FLOUR—Best white wheat family,	barrel.	6 50	7 00
Do. do. baker's	"	6 00	6 50
Do. do. Superfine,	"	5 25	5 37
Super Howard street,	"	— —	— —
" " wagon price,	"	4 75	—
City Mills, extra,	"	5 27	5 37
Do.	"	4 75	4 87
Susquehanna,	"	5 00	5 12
Rye,	"	3 37	3 50
GRASS SEEDS, red Clover,	bushel.	3 50	4 00
Timothy (herds of the north)	"	2 50	—
Orchard,	"	3 50	—
Tall meadow Oat,	"	2 50	—
Herds, or red top,	"	1 25	—
HAY, in bulk,	ton.	15 00	17 00
Pressed,	100 lbs	70	1 00
HEMP, country, dew rotted,	pound.	6	7
" water rotted,	"	7	8
LIME,	bushel.	30	35
OATS,	"	31	32½
OIL, linseed,	gallon.	85	— —
PEAS, red eye,	bushel.	80	—
Black eye,	"	90	1 00
Lady,	"	95	1 00
PLASTER PARIS, in the stone,	ton.	3 25	—
Ground,	barrel.	1 37	—
RAGS,	pound.	3	4
RYE,	bushel.	68	70
TOBACCO, crop, common,	100 lbs	3 50	5 00
" brown and red,	"	4 50	6 00
" fine red,	"	6 00	8 00
" wrappery, suitable for segars,	"	6 00	12 00
" yellow and red,	"	8 00	12 00
" yellow,	"	13 00	17 00
" fine yellow,	"	15 00	22 00
Seconds, as in quality,	"	4 00	5 00
" ground leaf,	"	5 00	9 00
Virginia,	"	4 00	—
Rappahannock,	"	3 00	4 00
Kentucky,	"	4 00	8 00
WHEAT, white,	bushel.	1 10	1 20
Red,	"	95	1 05
WHISKEY, 1st pf. in bbls.	gallon.	23	24
" in hhds.	"	21	21½
" wagon price,	"	20	—
WAGON FREIGHTS, to Pittsburgh,	100 lbs	1 50	—
To Wheeling,	"	1 62	—
		washed.	*unwash*
WOOL, Prime & Saxon Fleeces,	pound.	50 *to* 60	24 *to* 26
Full Merino,	"	40 50	20 24
Three fourths Merino,	"	33 40	18 20
One half do	"	27 33	16 18
Common & one fourth Meri.	"	22 27	16 18
Pulled,	"	25 30	16 18

Peas and Beans are scarce and much wanted.

IMPROVED SHORT HORNS.

MR. POWEL having left his farm, offers for private sale, his stock of improved short horned CATTLE, all of which have either been imported by him, or bred on his farm from animals selected for him in England.

Direct to WILLIAM COUCHES,
Care of John Hare Powel, Esq.
Powelton, April 17th, 1834.—May 9 9t

POINTERS.

FOR SALE, several Pointer Puppies, littered 22d Nov.; they are of the very best blood, and are all most beautifully formed, and marked, being white with liver spots.
Price $10 each. Apply to I. I. HITCHCOCK.

BALTIMORE PROVISION MARKET.

	PER.	FROM.	TO.
APPLES,	barrel.	$2 50	$—
BACON, hams,	pound.	10	—
Shoulders,	"	7	8
Middlings,	"	7	8
BUTTER, printed, in lbs. & half lbs.	"	25	31
Roll,	"	16	25
CIDER,	barrel.	3 50	5 00
CALVES, three to six weeks old	each.	4 00	7 00
COWS, new milch,	"	15 00	27 00
Dry,	"	9 00	12 00
CORN MEAL, for family use,	100lbs.	1 30	1 35
CHOP RYE,	"	1 50	1 56
EGGS,	dozen.	12	—
FISH, Shad,		— —	— —
" salted,	barrel.	6 00	6 50
Herrings, salted, No. 1 & 2,	"	3 62	3 75
Mackerel, No. 1, 2 & 3,	"	4 75	6 25
Cod, salted,	pound.	3½	—
LAMBS, alive,	each.	1 25	2 00
Slaughtered,	quart'r	37½	75
LARD,	pound.	8	9
POULTRY, Fowls,	dozen.	3 00	—
Chickens,	"	1 25	1 50
Ducks,	"	3 50	—
POTATOES, Irish,	bushel.	75	1 00
Sweet,	"	—	—
VEAL, fore quarters,	quart'r	50	75
Hind do.	"	75	1 00

ADVERTISEMENTS.

VINE DRESSER, FARMER & GARDENER.

A YOUNG FRENCH EMIGRANT, just arrived in this country, (having a wife with two children) is desirous of finding employment as a Vine Dresser, Gardener or Farmer, having been brought up to the business. His wife as well as himself will take part in such labors, if they can find employment. Any person wanting such assistance may apply (post paid) at "No. 8, Light-street Wharf," Baltimore, Md. May 16.

FRESH GARDEN SEEDS—NEW STOCK.

THE subscriber has now on hand a very extensive and complete assortment of GARDEN SEEDS, which he ventures to recommend to his customers and the public as *good* in every respect. He is prepared to execute orders either for dealers or families at the most reasonable rates at which *first rate articles* can be obtained.

AGENCY—He also acts as agent for the procurement of CLOVERSEED and various GRASS SEEDS whenever he has them not in store; also Agricultural IMPLEMENTS, Fruit and Ornamental TREES, SHRUBS, GRAPEVINES, &c. Orders for these must be accompanied by either cash, or directions to draw for it when the articles are shipped. He also attends to the purchase and sale of CATTLE and other domestic animals.

May 19. I. I. HITCHCOCK.

TURNING AND MILL SMITHING.

THE subscriber respectfully informs his friends and the public generally, that he has opened a Turning and Smith Shop adjoining Mr. William Miller's Foundry on the east side of Jones' Falls, opposite the Fish Market, where he is prepared to execute all kinds of Turning and Smith-work, and to fit up Rail Road work, Tobacco Presses, and Mill work generally. Also Stage and Coach Axles made or turned to order. All orders thankfully received and promptly attended to.

May 9. GEO. W. GWINN.

PLANTS.

FOR SALE at this establishment,

Early French, Early York, Early George, Flat Dutch, } CABBAGE PLANTS, at 50 cents per 100

Bullnose and Cayenne } PEPPER PLANTS at $1 pr 100

Mammoth Tomato Plants, at $1 per 100
Purple Egg do. at 25 cts. per doz.

May 9. I. IRVINE HITCHCOCK.

LUCERNE OR FRENCH CLOVER.

FEW articles of foreign introduction have ever succeeded so well as this valuable Clover. Many of the first Agriculturalists in our country have, and still continue to cultivate it with increasing success. We could give the most respectable names as references, but would merely mention as one, J. Buel, Esq. of Albany, who has given it the fairest trial and is fully satisfied of its utility and economy to the farmer; also, V. Livingston, Esq. Greensburgh, N. Y. The following is from James Byrd, Esq. Flushing, Long Island, who has cultivated it for the last ten years. He has kindly communicated to us the result of his latest experience, which should be carefully read by all agriculturists. Mr. B. is well known as one of the best farmers on Long Island, and what is not a little to his skill and reputation, he beat Cobbett hollow during the Ruta Baga war a few years since. Mr. C acknowledged that Mr. Byrd's mode of culture and returns exceeded his by all odds; he was struck with admiration when viewing his well kept field and superior quality of his Turnips—but we must proceed and in order to give the valuable Clover the widest circulation, we have reduced the price to 25 cents per lb.—was formerly 50 cents.

"FLUSHING, 2d mo. 1834.

G. T. & S.

Respected Friends:—I now hand you a particular statement how I managed my Lucerne.

1831. I this spring sowed 20 lb. of seed on my wheat about the time clover is usually sown, and harrowed it both ways with a sharp heavy iron tooth harrow. It came up well, and produced three good crops of hay the following year.

1832. Harrowed the lot three times over, and, in order to see whether it prove injurious, I had part of it done six times over. I did not find that it injured the plants, but had this good effect, that it killed nearly all the weeds and natural grass, and was very beneficial to the Lucerne.

1833. Had it well harrowed again this spring, and had three good crops of hay. I weighed part of the first crop after it was well cured, and found it produced nearly two and a half tons per acre.

The harrow ought to be made in two parts, and hung together with hooks and eyes, it being much easier to clear them from grass than when made in the usual way, and, in my opinion, are much better for all purposes: it ought to be so constructed as for the teeth not to follow each other. Be careful to pick up the stones after every harrowing, and it would be well to harrow it after every mowing. Light, dry land is best for the grass. Unless the land is very level, I think it would be best to place it in ridges twenty feet wide. If sown in ridges, it must be always harrowed the long way. If any of your friends find it difficult to get harrows of the description I have given, they can procure them of *Whitehead Cornell*, Flushing.—The clover ought to be raised eight or ten inches above harrow, in order that it may run level; otherwise it will injure the plants. I had mine made with notches, to regulate the height. I am convinced that the best way to prepare land for Lucerne is to plough in *plenty* of manure in the spring, and plant it with corn, having it well ploughed and hoed, so as to be kept perfectly clean. In the fall, after taking off the corn, sow wheat, manured with ashes"

The seed now offered is what is called *Lucerne du Provence*—which simply means that it is the *Provence* seed, from Provence, the finest Lucerne county in France. We have never imported any other but this sort. Ours is from the first house in France, and growth 1833. We have never advertised it as *du Provence*, as many of our plain friends can't get their tongue around these *break jaw* names.

On hand, as usual, an extensive collection of Garden, Field, and Flower Seeds: Bird Seed of every sort.

Also, 100 bushels Orchard Grass Seed, growth of the last season, $2 50 per bushel; White and Red Clover, Timothy, Herds and Blue Grass, &c. &c.

G. THORBURN & SON, 67 Liberty st. N. Y.
may 16 2t

SUBSCRIBERS can have their volumes of the AMERICAN FARMER neatly half bound and lettered at this establishment, at 75 cents a volume. Most of the Nos. can also be had at 10 cents each, to complete files.

☞ One set of the AMERICAN FARMER complete, in 15 vols. half bound and lettered, may be had at this establishment for $60. May 9.

Printed by SANDS & NEILSON, S. E. corner of Market and Calvert-streets.

THE FARMER & GARDENER;

AND LIVE-STOCK BREEDER & MANAGER.

CONDUCTED BY I. IRVINE HITCHCOCK, AND ISSUED EVERY FRIDAY FROM THE AMERICAN FARMER ESTABLISHMENT, AT $5 PER ANNUM, IN ADVANCE.

No. 4. **BALTIMORE, MAY 30, 1834.** **Vol. I.**

☞THIS publication is the *successor* of the late **AMERICAN FARMER,** (which is discontinued,) and is published at the same office, at five dollars per year, payable in advance.

American Farmer Establishment.

BALTIMORE: FRIDAY, MAY 30, 1834.

THE SEASON.—The weather has at last become more seasonable, and our farmers and gardeners are beginning to appear in rather better spirits than they have done for some weeks past.—The report is, that peaches, apples, and most other fruits, are destroyed. Early corn has been cut down to the ground, two, and some three times, by the frost. The prospect for gardeners is rather gloomy.

However, taking our whole country, there is some relief in the prospect:—a kind Providence in his wrath, ever remembers mercy. If the farmers are likely to be cut short in their crop of corn, they still have the promise of an abundant reward in their crop of wheat. A cold spring is generally found to produce a plentiful crop of that great staple of our State. Here is offered an inducement to the farmer to multiply the objects of his culture,—the season that destroys one crop will produce another in abundance. The cold, wet spring, that causes the seed-corn to rot in the ground, or from lack of sun, favors the operation of the cut-worm, until it is destroyed, at the same time will be much in favor of the crop of wheat. If the late frosts destroy the blossom of the peach and apple, the grape is not so far advanced as to be endangered. If there come a rain at the critical time of the grape being in blossom, which sometimes destroys that crop, it happens just in the *nick* of time to insure a fine crop of clover;—and again, if the ground should be so wet that the spring-work cannot be carried on in the field, the boys may be profitably employed in feeding the silk-worm;—and if all the different crops should be in a situation to receive attention at the same time, then the farmer may well afford to hire a few day-laborers. Many other considerations might be urged in favor of multiplying the objects of cultivation on a farm. We propose to notice this subject more particularly hereafter.

The celebrated Road maker, McAdam, has been knighted by the King of England.

PINCHING OFF THE POTATOE BLOSSOM.—We have heard this practice strongly recommended by a very successful gardener. It is said to increase the crop both in quantity and quality.—Analogy would seem to support this doctrine, for all well know, that the production of the flower and seed consumes great part of the sustenance of every plant, during their formation. We request our subscribers to put this principle to the test, and give us the result of their experience.

IMPORTANT IMPROVEMENT.—By papers just received from Panama, it appears that a subscription of $90,800 had been made for the construction of a Rail-Road from Portobello, on the Atlantic coast, to Panama on the Pacific; and that there is a fair prospect of its being speedily accomplished. This will be the most important road of the kind ever constructed. A gentleman by the name of Ventura Marroguin, has discovered a passage from Cruces to Portobello, *i. e.* from sea to sea, in a great measure free from hills, which can be accomplished, and which he has actually accomplished, *in less than one day.*

A PROCLAMATION.—The locusts have been, within the last year, very destructive in some parts of China, and the countries bordering on that empire—insomuch that Foo Yuen, a Vice Roy of one of the Provinces, a kinsman of the Emperor, issued his PROCLAMATION, *protesting* against their enormities, and prohibiting the entrance of the locusts into his territories, under pain of death. It is said that the locusts treated his Proclamation with contempt.

MORUS MULTICAULIS.—A subscriber asks our opinion concerning this tree as a hedge plant. We answer confidently that it will not answer for a hedge. Cattle are extremely fond of it, and would soon "eat up the fence" if made of so delicious a material. Its extraordinary value as food for silk worms *begins* to be understood. Compared with the white mulberry, it will become fit for use 50 per cent. sooner, will yield 50 per cent. more food for the worm, and of a quality 33 to 50 per cent. better at the same time.

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707 bears were killed last year in the state of Maine.

PRODUCTIVE SMALL FARM.—The Ohio Repository furnishes the following product of 15 acres of improved land.

Mr. Thomas Gibbons of Harrison Co., Ohio, has a farm of twenty acres of land, 15 of which are improved. He keeps three cows, sells 12 lbs. of butter per week, and from 50 to 60 lbs. of cheese per annum. He killed 2,200 lbs. of pork; sold 1,723 lbs. and keeps 7 hogs over winter. He raised 100 bushels of wheat, and 2½ acres of corn; mowed 3 tons of clover hay, and one of timothy; and has from 7 to 9 bushels of clover seed for sale. He keeps two horses and 10 head of sheep; has 3 children; and his hired labor costs him but $5.

SNOW IN MAY.—The Burlington (Vt.) Sentinel, of Friday last, says;—"Such a storm as is now visiting this section of the State, has not been experienced since 1816. It commenced snowing and blowing in the afternoon of Wednesday, and continued through the night, and is now (Thursday, 12 o'clock,) bearing down upon us from the North with unabated fury. The snow is now nearly 12 inches deep. The extent of damage which will follow in its train, must be considerable. Fruit trees, which were principally in blossom with fine prospects, must be much injured by the weight of snow, and perhaps rendered barren for the year. The grass had sprung up, and yielded sufficient food for beasts, and as hay is generally scarce at this season of the year, cattle, sheep, and horses, must suffer very considerably. In case a sudden thaw should follow, much damage must inevitably result to roads and bridges. It is to be hoped however, that the storm will pass off without serious consequences."

VALUABLE CARGO.—The Columbia Spy of Saturday says—"An ark arrived at this place a few days ago, loaded with 5000 rakes; 600 bench screws; 120 bedsteads; 1000 hoe handles; 1000 cradle sneaths; 2000 window blinds, and 12 or 15,000 slats for venitian blinds. These articles came from the manufactory of Mr. Edward L. Paine, of Bradford County, Pa. and reflect much credit on the enterprise of that gentleman. In addition to the above, we were told that on the passage down the river, about 2000 rakes, 1000 blinds, 500 screws, and 25 bedsteads, were disposed of.—When the ark left Bradford County, the cargo must have been valued at between two and three thousand dollars. It will proceed to Baltimore.

The hydro oxygen microscope is now so improved, that a flea, when magnified, covers 200 square feet!

THE FARMER.

We with much pleasure give place to the following communication from our friend, on the cultivation and management of Tobacco, and we invite all planters to make our columns the medium for conveying to the public their particular modes of management in this, as well as all other branches of agriculture. It is by this mutual interchange of ideas that all will be eventually benefited.

To the Editor of the Farmer and Gardener:

Sir—To enable us to answer the numerous enquiries, which are constantly made relative to the cultivation of Tobacco, we requested an extensive, and highly intelligent planter (of whom we have received ten varieties of seed of the choicest Maryland sorts) to give us his views relative to the proper mode of cultivation and management.

We have the pleasure of enclosing his remarks on the subject. If you think them worthy a place in your valuable paper, publish them, the result may prove useful to your numerous subscribers.

Respectfully, yours,

SINCLAIR & MOORE.

Baltimore, May 20th, 1834.

Cultivation and Management of the Tobacco Crop.

The ground is prepared as you would for cabbage seed; in addition, it is always, when taken from new ground, burnt by placing a quantity of brush upon it, then set on fire, for the purpose of cleansing it from all filth. The repetition of burning may be avoided by always weeding up the bed after you are done with it for the season. The *quantity* of seed required is about a wine-glass full to 10 yards square; but in this we differ in practice very much, we know if we could be certain it would always come, that this quantity would be enough, and as it is uncertain we most always sow 3 times as much, with the calculation, should it be too thick, to rake out the over quantity. This *raking* is of rather a recent date and is done by a small rake made of 10d nails, put about 5-8 of an inch apart with sharp points; and it is used with a little slight of hand, so as to divide the plants without leaving them in rows. This *operation* is performed when the plants are about the size of a five cent piece, which is usually in the early part of May, and just before we think of planting.

Planting is usually done from the latter part of May to the 10th of July; here again I must refer you to the mode of preparing and planting cabbages in hills. The *size* of the plants, about 3 inches broad are the best size to plant out; when transplanted they are also cultivated very much as cabbages, only oftener worked with the plough and hoe.

Usually in the middle of August Tobacco will signify its approach to ripening by buttoning and blossoming, at which time we quit working it, and proceed to break off the blossoms to such a leaf as we think will ripen as soon as the bottom leaf, (which we call topping Tobacco) after this it will commonly put out succours just above the joints of the leaves, these must be broken off, and then we think it time to house. *Cutting* and *housing*—this is done with a similar instrument to a butcher's cleaver. After it is cut it may lay for a little time until the leaves fall and will not break by handling.

From the ground it may be taken in large loads to the Tobacco House where it is usually pegged (a wooden peg 6 inches long is driven into the butt by which it is hung on the sticks in the house) but sometimes split; this is done by a knife spliting the stalk down nearly to the butt, before it is cut down in the field, and when brought to the house it is straddled across the sticks, instead of being hung on them by the peg. The sticks are placed on bearers in the house about 6 inches apart the plants put from four to six inches apart, according to the size, where it is cured either by fire or suffered to cure by the air. It is considered cured when the stem of the leaf is dry. *Stripping* comes next; for which we choose moist weather, the only time it can be handled without crumbling, and tie it in bundles from which it is generally put in bulk and watched that it does not heat; after which the bundles are straddled across the sticks for *conditioning* to pack; here it must be noticed that the bundles get completely dry, and then as soon as moist weather again enables you to handle it, it must be taken down and put in large bulks and weighed; this is called *close bulks*, here it is ready for packing; that process is so generally known that I do not deem it necessary here to say anything about it.

The kinds. Tobacco is esteemed mostly for two reasons, one for *quality*, the other *quantity*. It is supposed the thinner jointed Tobacco, generally cures the brightest, but I do not entirely subscribe to this opinion, as I have often seen the thick jointed of as good color. Am inclined to think there is more in the soil than in the kinds; a poor hickory soil will produce a good color when I have seen rich black soil produce very dull Tobacco; but as a general rule give me the thick jointed sort, and upon tolerable strong loom. Rich stiff soil will not produce a bright crop, but will give a heavy crop; quite sandy soil on the other hand is likely to produce bright, but a light crop. So upon the whole I should prefer the thick jointed Tobacco, and upon a loomy soil of pretty good strength to produce the most profitable crop.

Tobacco is a very troublesome crop; it never being off hand. The seed of the new is sown before the old crop is packed, and sent to market. It is subject to many enemies, among them the fly in the bed and in the field, when small, the ground worm, the bud worm, the web worm, and lastly and most destructive, the horn worm; these come in immense quantities and are similar to the Tamata worm. They will, from the eggs laid upon the leaves, grow in a few days as large nearly as your finger, and will, in a short time, leave nothing of the plants but the stems and stalk. These worms are the common enemy; they commence with the first growth of the Tobacco and at different periods follow it up until the crop goes to the House. *Our plan* of defence is to pick them off by hand or use Turkeys, they are best because more expeditious; Turkeys by driving them into the Tobacco will regularly examine each plant and pick them off.

I neglected in its place to say, what time the seed should be sown; from February to the first of April is the best time; and the quantity raised per acre is generally one thousand pounds, from 3,500 to 5,000 hills, according to the quantity of land.

Cultivation of Grass at the South.

We give place to the following communication, in our columns, to-day, to the exclusion of a press of other matter, in consequence of the great importance of the subject on which it treats; as well as, to show our sympathy with the respectable author of that letter, under the disappointment which we fear he is doomed to labour. We too, were some time ago, astonished at the obstinacy of farmers, in persisting in old habits, when improved modes of culture were susceptible of such easy demonstration, to be clearly profitable; but the fact is, the yeomanry are the last portion of our community who will tolerate 'Experiment.'

We were some time ago conversing with a farmer, who lived in a very poor part of the country, where he had to go twenty miles to a tide meadow for all the hay his stock consumed. We asked him if he had ever tried plaster and clover, observing to him, that his land had the appearance of being such as might be improved by that means, to supply a sufficiency of hay for his stock, and at the same time be a means of improving his farm. He said he had used it. He at one time purchased half a bushel of plaster, and sowed one half of it on a small piece of clover, about a week before mowing it; but he could not see that it benefitted the crop at all. After taking off the first crop, he sowed the remainder of the plaster on the same ground. It did indeed, (he said) make the clover grow very large; but it lodged, and there coming on, at that time, a long wet spell of weather, it all rotted; and he had never tried plastering since.

With such clear evidence of the beneficial effects of plaster before his eyes, this farmer (if he deserved the name) continued to jog on twenty miles for his hay, and to remain contented with getting ten bushels of corn per acre. Could he so far have subdued his veneration for the practices of his forefathers, as to have followed up sowing clover, and plastering, at the rate of one bushel (cost forty cents) per acre, he might have cut from one to one and an half tons per acre of good hay—and had he pastured the second crop, (but not too closely) and the next spring permitted the grass to grow, till as near the time of planting corn as possible, and then turned it under to the depth of eight or ten inches, according to the sta-

ple of the earth, he might have gathered forty bushels instead of ten bushels an acre, and the ground would have been left rich. We can assure our readers we have seen such increase from the above-mentioned course of practice. But such a course would have been at that day and in that place, called silk stocking *farming*, *the opprobrium* of the art.

It is generally considered to be much more indicative of a sound mind and good judgment, to spend two days with two horses, wagon and hand to drive them, in travelling twenty miles for half a ton of hay, and to pay from six to seven dollars for it, than to be dabbling with new fashioned things, even if you could, by any new means (for forty cents) get three times more hay, and save great part of the labour. We can assure Mr. Moore, if our pages should ever meet his eye, and we hope they will, that such obstinacy is not proper to his country alone; and we hope he will not suffer the bad habits of others to deter him from prosecuting a design so well conceived, and which, if pursued, will certainly be productive of much satisfaction to himself. We hope to hear further from him hereafter.

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[From the Knoxville Register.]

NATIVE GRASSES.

Among the many improvements and advantages yet to be learned by the agriculturist of this and other Southern States, there is none more important than the cultivation of Grass. Notwithstanding the evident benefit and great saving, it appears exceedingly difficult to pursuade our planters of its value. Why it is so, is beyond my conjecture. I am of the opinion that one experiment will entirely remove this obstinacy; and trust, for the benefit of all concerned, that there are few who will refuse one effort, no matter on how small a scale, until it shall be properly estimated. To descant upon its value is unnecessary.

Suffice it to say, that last year I made upwards of eighty tons of excellent "Crab Grass" and "Crowfoot;" the quantity to the acre varying from one to two and a half tons according to the quality of land.

The late Col. Thos. G. Lamar, of S. Carolina, than whom there were few more practical or scientific farmers, was in the habit of cultivating the "Crowfoot" Grass for many years, and from various trials in comparison with other grasses, gave it a decided preference; and mentioned that "he had kept his carriage horses, (in moderate use,) for six months in excellent order without any other food than this hay," and I am satisfied that after horses become a little accustomed to it, that they will prefer it to 'fodder.' Such is my own experience. There is much less wasted. We all know, that have taken the trouble to notice that horses *well kept*, and particularly those over eight or nine years old, will not eat the stem of fodder, and in that consists fully one half of the weight of the blade, which at the best does not afford as much nutriment as the hay.

Another, and certainly not inconsiderable advantage is, that you are at no expense for seed, being indigenous. Instead of sending to the north, and paying ten or twelve dollars a bushel for clover seed, waiting until the second year for a doubtful crop, you have only to prepare your ground properly, and in less than ninety days, with a few showers, it is ready for mowing. This is an operation, that few of our negroes understand. It requires more skill than cradling, but little practice is necessary to learn; the most important matter is, to cut even and as near the ground as possible. Two hands can cut and cure from four to five thousands pounds per day. It requires a few hours more sunning than fodder, and when stacked, or housed, is much improved by sprinkling a peck of salt to every 1000 pounds; the sweat that it undergoes in the "mow" will dissolve it and your stock eat it with more avidity and benefit.

The mode I have adopted in preparing the ground is as follows: First check off the ground with a plough in squares of twenty-five or thirty feet; then haul out the manure in tumbling carts and drop a heavy one horse load in the centre of each; spread it even and plough it in.—This may be done any time between October and May, and will generally produce a crop of weeds. In all the month of June, between the 10th and 12th (if possible) plough it again, harrow it level, and roll it smooth. By the latter operation (which by many is omitted,) the ground is completely levelled, and enables the mower to shave it close, and an inch next the root is equal to two at the top.

Should any of your patrons make the experiment, I trust they will not regret the suggestion of

Your Obedient Servant,

N. B. MOORE.

Richmond Co. April 3, 1834.

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[From the Fincastle Patriot.]

A synopsis of James Trundle's *mode of Agricultural Improvement, read to the Agricultural Society of Blount County, Tenn., at its Semi-Annual Meeting, at Maryville, March 26th*, 1834.

It is perhaps unnecessary for me to state to this society the situation in which I found my farm 12 years since, when I first settled on it, as many of you well know that it was what is familiarly called in this section completely "worn out land;" that by the unwise and improvident system of "husbandry" practised heretofore in this country its sterility had been rendered complete. Thus much I deemed it necessary to premise that it may be made the more obvious that it is altogether practicable yet to restore and also to elevate the agricultural productiveness of our soils, by a wise and economical system of improvement to an equality with that of any other agricultural and seed growing country.

Without detailing here the system by which my farm has attained its present improved condition, I shall proceed to state in the first place its present productiveness, after which I will give my plan of fertilising the soil.

In the year 1833, I raised wheat enough to yield seventy-six barrels of flour for market, after retaining a sufficiency for family use, till harvest, 1834; besides ninety-seven bushels for seed. This flour yielded me a neat profit of four hundred and fifty-six dollars; together with other advantages derived from the offal.

In the same year I raised off 21 acres (upland) seven hundred and fifty-six bushels of corn, which would be an average of thirty-six bushels per acre. The corn was planted in hills four feet and a half distant.

About the last of January, 1834, I killed a beef which weighed 568 lbs. This animal yielded me 120 lbs. of neat tallow. The plan pursued in fattening was as follows:—He was stalled about the 15th Nov. 1833, in a close dry stall, with his trough and rack so low that he could get his food without any inconvenience. Great pains were taken to keep him clean, by frequently covering his stall with dry straw. His food was clover-hay constantly standing by him, corn meal four times a day, and occasionally a few nubbins. He was salted plentifully, and watered regularly.

As the object of this society is to collect and disseminate facts upon which to establish correct principles of agricultural improvement, I have thought it proper to lay before you in my humble way the manner of farming which observation and experience have taught me to pursue. I disclaim, however, any peculiar knowledge on this subject more than others of my neighbors. But believing from what I see in traversing the country generally—1st, That there is a great and ruinous deficiency in the public attention to this matter, and that none, or comparatively few of our farmers, have been cultivating their lands to any very great advantage, either to the increased productiveness of the soil or to the accumulation of wealth; 2dly, That the adoption of my plan will be followed by a very sensible increase in both of these particulars; while it will be accompanied by a great reduction in the number of hands necessary to a given quantity of land, I have flattered myself that it would be somewhat important to the public thus to present my views to you. The attainment of these desirable objects constitutes the great secret of farming.

In the first place I divide all my cleared land into five equal lots or fields. This being done, I begin with the first field, which for convenience I shall call No. 1. The first year it is put in corn. In the fall following I seed it down in wheat or rye, or leave a part for oats next spring, at discretion. In February or March this (No. 1) is to be sowed with clover, on the wheat, rye or oats. About the time the young clover begins to grow, I give it a dressing with plaster, say 70 lbs. to the acre, though I believe 100 lbs. to be not too much. 2d year I reap a crop of small grain off of it. 3d year it will yield its first crop of clover hay. And after mowing, the ground should have another dressing of plaster to bring on the second or seed crop, which will be as profitable as it had been any other year. 4th year No. 1 will remain in clover, which you may keep either for pasture or mowing at pleasure. No plaster should be used this year; but in the months of Aug. and Sept. it being the most leisure period with farmers, is the proper time to haul out all the manure that your farm will afford, and place it on

the poorest spots of this field. This being done, now is the time to put in the plough, and turn under the clover of this No. 1, for wheat. The land should be ploughed not less than eight inches deep; or if the soil is not much reduced, ten would be better:—after which the ground should be levelled with a large harrow. Then lay your ground off in suitable lands for sowing. The wheat should now be sowed, and from a bushel to a bushel and a half, according to the fertility of the soil, should be sowed to the acre. It is now to be harrowed in with a large harrow. A crop put in in this way will amply reward the farmer for his labor, and much improve the soil. This will make the fifth crop of No. 1, which will constitute the series of rotation through which it passes every five years. After which it will be in a state of preparation for the renewal of the series, that is, a crop of corn.

I think it will appear evident that by having a farm arranged according to the foregoing division, that is into five equal parts or fields, that you will have in no two years of the series a succession of the same crop on the same field, except the third and fourth, which will be in clover either for hay and seed, or pasture, at the pleasure or convenience of the farmer; which instead of being an objection, is a positive advantage. For the sake of clearly illustrating the whole process of rotation upon my plan, I have thought it best to annex a tabular view, so that by a single glance the whole of the plan may be seen at once.

1st Field—1—2—3—4—5
2d " 1—2—3—4—5
3d " 1—2—3—4—5
4th " 1—2—3—4—5
5th " 1—2—3—4—5.

It will be seen, that upon this plan, the farmer cultivates his soil but once in five years in corn, receives from the same two crops of wheat, and has each field two years in clover for hay and pasture. Farmed in this way each field will yield to the producer a bountiful supply every year of all the necessaries and comforts of life. And it must be self-evident that upon this plan the soil will annually imbibe a correspondent increased fertility—the farmer's wealth increased, and his stock abundantly fed.

My plan for making and procuring manure is as follows, viz: I feed all my straw and stuff to my stock in my barn yard; which surely is the best mode to make the most of it and of the best quality. By making it there instead of the field you obviate the evils of tramping your fields which must be very injurious to your land, especially in wet weather, which is frequently the case in winter or the stock feeding season. Upon this plan I have carried out from my barn yard in one season from two hundred and fifty to three hundred good four horse loads of manure; and by placing it on the poorest places have been able to reap 20 bushels and upwards of wheat to the acre. Farmers would profit much by penning their cattle and sheep of nights on the poorest spots of that field which they are pasturing and intend for fallow the following fall. Great care should be taken not to pasture too long the field you intend to fallow for wheat, as this may very much deteriorate its productiveness the next season. My opinion is that if the whole crop that grows on this field was turned down the recompence would be greater both to the soil and the farmer than the profit derived by pasturing.

Much has been said about plaster injuring the soil, and much blame has been ascribed to that valuable nutriment in injuring vegetation. But my experience and observation confirms me in the opinion that no fears need be entertained of its either injuring the soil or vegetation if it is used only twice in the five years upon the plan suggested. A good crop of vegetable matter should be returned to the soil once in five years if we would do it the justice that it requires by plastering. I have now used plaster twelve years on my farm at Maryville, and have only to say that the consequences has been that my labor and pains have returned me fourfold.

JAMES TRUNDLE.

THE GARDENER.

[From the Gardener's Magazine.]

On the Coiling System of cultivating the Vine in pots—by Mr. *John Mearns*, F. H. S., Gardener to his Grace the Duke of Portland, Welbeck, Nottinghamshire.

Sir,

As I have communicated an account of my coiling system of cultivating the vine in pots to several persons, and have also given a statement of my experiments to the London Horticultural Society, I feel it to be a duty also to lay my practice before you.

This coiling system is certainly a completely new feature, and, I think, a very valuable one, in the art of grape-growing. Is it not a matter of great importance that, in consequence of my discovery, a gardener, who may go to a situation, in the autumn, where no grapes have previously been growing, may be enabled to produce there easily, for the ensuing season, from 500 to 1000 bunches of fine grapes? All that are wanting to enable any gardener, so circumstanced, to do this, are, the prunings of the vines from any garden, that would otherwise be thrown away, and, of course, a convenient frame, pit, or house, for growing them in. If abundance of shoots can be procured, and there is a sufficient extent of frames, &c., either temporary or permanent, two, three or five thousand bunches may thus be produced in a garden where grapes were never seen before.

The coiling system is nothing more than taking a long shoot or cutting from a vine, cutting out all the buds except a few at the upper end, and then beginning at the lower end, and coiling the shoot round and round, say from three to six or eight times, the inside of a pot of 12 or 14 in. or more in diameter. The shoot may be of any length, from 6 ft. to 30 ft., and it may be entirely of last year's wood; or the greater part of it may be of old wood, provided 3 or 4 ft. at the upper end be of new wood; because, as every gardener knows, the buds from young wood are more certain than those from old wood of producing blossoms the first year. The vine being coiled round in the pot, and plenty of drainage being put in the bottom, take care that the end of the shoot left out of the pot, on which the fruit is to grow, be not injured at the point where it separates from the coil. This shoot may be 2 or 3 ft. long; and, to keep it steady, it may be tied to a stake, or coiled round two or three stakes. After this, fill up the pot with a rich loamy soil, pressing it firmly against the coil, as if you were making firm the end of a cutting. Unless this is done in such a manner as to bring every part of the coil in close contact with the soil, it will not root so readily as it otherwise would do. The next operation is, to wrap up all that part of the stem which is above the pot with moss, and this moss must be kept constantly moist till the grapes are formed. The pot should now be plunged in bottom heat, either in a pit or forcing-house; but, wherever it is plunged, care must be taken to regulate the temperature of the atmosphere of the house, in such a manner as to prevent the top of the vine from being excited before the roots. If this should happen, the young shoots produced will soon wither for want of nourishment. Abundance of air, therefore, should be given for several weeks, so as never to allow the temperature of the atmosphere of the house, frame or pit to exceed 45 or 50°, while the temperature of the medium in which the pots are plunged may be as high as 65 or 70°. When, by examination, you find that fibres are protruded from the coil, the temperature of the atmosphere may then be gradually raised, when the buds will break, and the shoots will grow apace.

The shoots proceeding from that part of the stem above the pot should be led up to within 8 or 10 in. of the glass, and there trained, at that distance from it, towards the back of the pit or house. It is needless to state to the practical gardener, that each shoot will require to be shortened, freed from laterals, &c. Each vine will produce from three to twenty or more bunches, according to the length of coil and variety of grape. I have now (Jan. 17, 1834) upwards of 200 coiled branches in pots, and nearly fifty of them in action; some with twenty bunches of fine grapes on them.

I was asked the other day, whether vines so treated would not require frequent shiftings into larger pots; or, at least, to be shifted once a year. To this I answered, that while we had a plentiful supply of prunings from our own vines, or could procure them from those of our friends, the best mode would be to treat the plants, after they had borne one crop, as we do the roots of asparagus and other plants that we force; that is, to throw them away. If, however, you should wish to keep the coiled plants a second year, and the pots should be found to be too full of roots, turn out the ball, shake the soil from the coil, and cut away all the roots close to the shoot; then repot it as before. If this be done in winter, the plant will produce an excellent crop the following season; probably a better one than if the roots were allowed to remain, and the ball shifted into a larger pot or box. The pot or box is in either case soon filled with young vigorous fibres, like a hatch of young maggots, each eager for food, and consequently sending it up in abundance to supply the crop above. Can there be a doubt but that this is a far superior mode to keeping pots, or even fruit-tree borders, filled up with old inert roots?

Before my bunches are clearly developed, I have thousands of eager mouths or spongioles,

extending along the coiled shoot, and each gaping for food; some of these rootlets are 3 ft. long, and, before the vines are out of blossom, many of them are 6 ft. in length, and matted round and round the pot. You will easily understand from this, how important it is to supply vines so treated with liquid manure, either by watering from above, or by a supply from a saucer or feeder from below. I am, Sir, yours, &c.

JOHN MEARNS.

Welbeck Gardens, Jan. 17, 1834.

[From the Genesee Farmer.]

RUTA BAGA AND MANGEL WURTZEL.—As I have cultivated these roots more or less every season, for the last twenty years, I suppose a short account of my practice may be acceptable to such as are now commencing.

Three times plouging, with a harrowing and rolling after each, puts the ground in complete order to receive the seed of the ruta baga, which should be sown immediately after the last ploughing—the longer time the ground lays between each ploughing the better, so that the grass and weeds don't grow large, say not less than a month.

The time of sowing may vary according to circumstances and convenience—any time from the first to the end of the seventh month, (July,) will do for ruta baga in this latitude. If I wanted the roots for table use, I should not think of sowing before the middle of the month—if for cattle, it might do to sow the beginning; but I may remark that most of the failures I have noticed have been in consequence of too early sowing on land not well prepared; for, though turnips do not require a very rich soil, it should be perfectly mellow, and every particle of grass or perennial weeds ought to be entirely dead before the seed is sown. Thus the hoeing and weeding is performed with far less labor than would otherwise be required, and the roots will grow quick—this they must do to become sound and well flavored.

I have usually put on about six or eight two horse loads of dung previous to the first or second ploughing, as most convenient. This, however, is not necessary if the ground is naturally rich, or has been in grass for some time.

The method of sowing in rows is the best, in my opinion. I have tried various distances for the rows, from two to four feet—the former is decidedly too close, and the latter distance may be thought too wide; but I have found the bulk of crop greater on four feet space than on two feet; at any rate I think it is a positive loss of labor to sow closer than three feet. This leaves room for a cultivator to pass between the rows. The plants should be thinned so as to leave only one in a foot; it is important that this should be done as soon as the plants are large enough to resist the attacks of the turnep fly. The crop will be much diminished if this is not attended to, especially when vegetation is rapid. One pound of seed is amply sufficient for an acre if sown in rows—if broad cast, the same or rather less will suffice, on account of the increased difficulty of hoeing and thinning.

The common English turnep I consider but a very poor root to cultivate for cattle; but if managed as above directed for ruta baga, except to sow the seed two or three weeks later, very heavy crops could be raised; but I think mangel wurtzel is the most valuable root for cattle. It is a trifle more expensive to raise it—requires to be sown about a month earlier than ruta baga—is not so easily preserved through the winter, and requires rather a richer soil. On the other hand, it thrives best on soils too heavy for the turnep—the bulk of crop is greater—it can be sown to advantage after once ploughing, and is never eaten by insects as turneps are. Thus being a very certain crop, it received the name of root of scarcity, meaning, I suppose, that it never failed in times of general scarcity. Cattle, sheep and hogs, prefer it to any other root that I have ever seen, after they become used to it. Two pounds of seed will suffice for an acre, in rows three or four feet apart. I have always been sensible of a loss of time and labor, when I have planted this crop closer than four feet by fifteen inches from one plant to another. It is a gross feeder, and I believe no soil can be too rich for it, but it will amply repay the labor bestowed on it. I have raised them weighing twenty-five pounds each, and I believe there was one of these roots exhibited in London weighing 42 pounds.

Lastly, I may just say how I proceed with the work of sowing the seed, which, for each kind, does not vary much—having no drilling machine, I get a piece of plank or slab six feet long, more or less, according to the distance I intend to have the rows—saw out three blunt teeth, one at each end and one in the middle—put a long handle in the centre, and draw this thing over the ground cross ways of the last ploughing, letting one outside tooth go in the last marked row, thus making two rows every time. To expedite the sowing, I moisten the seed a little, and add a little lime or some white substance. This makes it easy to see how thick I sow it, and enables me by going at a quick step, to put in several acres in a day if required. J. S.

Owasco, 5 mo. 7, 1834.

ON THE CULTURE OF THE GARDEN BEAN.—I have been very successful for half a dozen years in obtaining two crops of beans from the same plants. In the summer of 1826, my first crop of magazan and early long-pod beans was, by a very strong and violent wind, blown down; this was done when the beans were in full blossom. The crop from the blossoms which the plants then possessed, was very fine and abundant, and gathered during July. In three weeks after the beans were prostrated, each stem pushed forth, from near the root, one or more, in some instances four to six fresh stems; these bloomed freely, and produced an abundant crop, which was gathered during September. Since that grew, I have uniformly bent down, so as to break the stalk near the root, my first and second crops of beans: I have by this means obtained four crops of beans from two sowings, and which supplied me from July 1st to 31st October. By this method only half of the seed was required which I had been accustomed to use, and the greatest advantage to me was that only half of the ground was required, so that my advantages by this method are fourfold. I always pinch out the tops when the plants are in full bloom; this throws the vigor into the production of fruit instead of a continued increase of stem and foliage.—[Mr. James Falkland, Pentonville, in the Gardeners' and Farmers' and Foresters' Record, No. 3.]

THE BREEDER & MANAGER.

[From Dickson's Live Stock and Cattle Management.]

The improvement of the various breeds of cattle, and the proper management of live stock in general, are subjects of such vast importance, not only to agriculturists, but to the nation at large, that they may be justly ranked among the most useful and valuable branches of the science of rural economy.

Every practical agriculturist, who has had sufficient experience in raising and managing this kind of stock, must be sensible that there is no other species of farming in which an extensive and thorough knowledge of the most improved system of management is so absolutely necessary and indispensable, in order to obtain a return of profit in any degree commensurate with the labor, difficulties and risk, which it inevitably involves. The period of time consumed by the growth of the animals, necessarily protracts the return of capital expended; and the diseases and accidents to which they are always liable, expose it to peculiar hazard. Yet, notwithstanding these objections, an intelligent breeder and feeder, who duly avails himself of all the advantages which the improved modern system of management presents to him, may, in many situations, reap more profitable returns for his capital, skill and labour, from this species of farming, than from any other branch of agriculture. For a very considerable portion of these advantages, the country is indebted to the indefatigable efforts of Mr. Robert Bakewell, who will be long remembered and revered, as the enlightened discoverer of many important inventions and improvements, which he propagated and established by a peculiarly persevering spirit of inquiry and experiment. To the example of this celebrated breeder must also be attributed much of that emulation among practical farmers, which, within a recent period, has extended the trial of many new discoveries, and the investigation of many doubtful theories by the only sure test of experiment; and has thus been the means of advancing this branch of rural art to a degree of systematic perfection, which never was contemplated by our ancestors.

The high prices which celebrity procured for certain peculiar breeds of various kinds of live stock, in consequence of their improved advantages, soon awakened the attention of farmers and breeders, with whom remuneration for their capital and labour is naturally the first consideration; and a spirit of competition soon becoming general, a great national benefit resulted from individual enterprise, in the increased productiveness of the aggregate stock of the country.

From the period when Mr. Bakewell's name first became popularly connected with Live Stock and Cattle Management, the subject has continued to occupy the attention of all classes of agriculturists. Many noblemen, and other persons of rank and opulence, land proprietors in various parts of the kingdom, have devoted their time and

attention to this particular branch of farming; and by a praiseworthy use of their wealth and influence, in regulating, correcting, and familiarizing new principles and methods, or propagating others, the result of more correct experience, have contributed very materially to its improvement.

Under such auspicious circumstances, this most valuable and useful art has been in a state of progressive advancement from its first public announcement to the present time, when its principles have become sufficiently established to assume the consistency of a system.

In performing the task of preparing a practical treatise on this system, for the instruction and benefit of farmers and breeders, the author has been anxious to render it as perfect as diligence and study could enable him, by a careful comparison of all the various theories that have been propagated, with the result of actual and long experience; he has endeavoured to convey the result of his labours in the plainest language, suitable to the subject, and has adopted the plan of treating upon each species and variety separately and distinctively; which, if it occasionally involves redundancies or repetitions, atones for those blemishes by combining the easy reference of a dictionary with the more ample information of a treatise.

—

Live Stock—in the language of the farmer or storekeeper, comprehends all sorts of domestic animals, including the horse, cow, bull, ox, sheep, goat, deer, and swine; as well as those of the rabbit, pigeon, poultry, and some other species. Beasts of pasture are those quadrupeds of the bull, ox, and cow kind, which chew the cud; they are the most perfect of the ruminant class of animals; and are generally termed,

Neat Cattle; or the large-horned Cattle.—Whatever difference of opinion may subsist, as to the beauty of the horns, which grow from the heads of bulls, oxen, cows, sheep, and other animals, it is unquestionable, that nature designed them for something more than ornaments, as they use them for weapons of defence against the attacks of their enemies. There are, however, some disadvantages attending long horns, and indeed, horns of all descriptions, which will be noticed under the proper head.

Beeves.—This is a general name given in several districts to oxen, and some other sorts of neat cattle.

Black Cattle.—This term is sometimes applied to neat cattle in general; but is more properly confined to that small, hardy breed, mostly of a black color, which occupies the high or mountainous districts of the more northern parts of the island. The beef of these cattle is generally of a fine grain, well marbled, and of a good flavor: but is occasionally spotted with black, even upon the choicest parts, if not made perfectly fat.

There can be no doubt that all sorts of neat cattle originally were wild; but as civilization proceeded, and the arts of cultivation became known, those animals which appeared the best adapted for the purposes of domestication were selected, and gradually rendered subservient to the power of man. According to the celebrated naturalist, Mr. Pennant, the following are the characteristic distinctions of this genus of animals:—"Cloven-footed, with or without horns, the horns bending out laterally: eight cutting teeth in the lower jaw, and none in the upper: the skin along the lower side of the neck pendulous; rounded horns, with a large space between their bases." The species of this genus constitute the principal sorts, from which varieties have been produced by intercopulation, and a diversity of soil, food, and climate: and which varieties, whether original or acquired, have been preserved in a permanent state by careful breeders.

The grand specific distinction which naturalists make in neat cattle (independently of the variations caused by climate, or the agency of other causes,) is between the Urus and the Bison.

The Urus, or common Bull.—This animal, in its natural wild state, exists, in temperate climates: it has in general a curled shaggy coat, especially on the forehead; the hair constantly long on the fore quarters, neck, and forehead, and depending from the chin; the neck elevated, thick, and short, with the tail long, the eyes red and fiery, and the horns thich and short. It grows to a large size, the female being larger than the English bull, and is of a black color.

The elevated crest, and lion's mane, are general characteristics of the Urus, or common bull: the former mark, especially, is retained to the latest stages of domestication, as is seen occasionally in the Devonshire, Alderney, and some other breeds of domesticated neat cattle. This species is now well established in the temperate and cold climates of the earth, especially throughout America; which has most probably become stocked by importations from Europe.

The Bison, or large Bull, is a native of hot, but is sometimes met with in cold, regions; and its characteristic mark is a hunch between the shoulders, which, in some of the largest of the species, is of considerable weight; and the flesh possesses an exquisite flavor. In the fore parts it has the same hairy appearance as the urus; the tail and legs are short, the eyes fierce, the forehead large, and the horns extremely wide. These animals are spread over most of the southern parts of the world, but with considerable diversity in respect to size and form. In the island of Madagascar, in Malabar, and other parts of India; in Persia, the Ukraine, Calmuc Tartary, Upper Ethiopia, and Abyssinia, they are of the proper *bison*, or large kind; and in Africa, the higher southern latitudes of India, and some parts of Arabia, they are of the small, or *zebu*, kind; in which the hair is finer, softer, and more glossy, than that of the common cow. Some of the Indian cattle attain a very large size, but are irregular as to the horns; many being entirely without them, and others having very large ones, either branching or pendulous. The oxen of this species are in much requisition for the purpose of drawing carriages, being quick, and frequently of a fine white color. These cattle have been occasionally imported into this country, and blended with English breads. The zebu is a dwarf sort of bison, and has undergone great variations from different causes.

The Musk Bull, which is found in the interior parts of North America, westward of Hudson's Bay, is most probably a variety produced by an intercopulation of the bison with the common European species, as the flesh of the wild bull of the European continent retains a musky smell. This animal is described as somewhat lower, but more bulky than the deer; the legs short; a small hunch on the shoulders; the hair of a dusky red color, very fine, and so long as to reach the ground; beneath which the body is covered with an ash-colored wool, of such exquisite fineness, that stockings have been made of it much finer than silk. The tail, only three inches in length, is covered with long hairs, of which the Esquimaux Indians make caps. The horns are close and large at the base, bending downwards, or turning out at the tips, and are about two feet in length. These animals are very prolific, and their flesh, notwithstanding its musky flavor, is esteemed good and wholesome food.

The Sarluc, Grunting Bull, or Ox, is domesticated in Tartary and Thibet, and may be considered to belong to the bison sort, having a hunch between the shoulders, and being capable of generating with that animal. It has, however, one remarkable peculiarity; for instead of lowing like an ox, it grunts like a hog: it also varies from the bison or zebu in other particulars; the body is covered with very long hairs hanging down below the knees, mostly of a black color, except on the ridge of the back or mane, which is white. The horns are short, upright, slender at the extremities, and sharp like the zebu's; the tail is similar to that of the horse, but white and bushy, and is held in high estimation in India, where it is used for various purposes. It is sometimes mounted in silver, and forms a brush for driving away flies; occasionally it adorns the ears of an elephant; and at other times, dyed red and formed into tufts, it ornaments the bonnets of the grandees. The sarluc butts, or strikes with its head, like a goat; and in its wild state is very ungovernable.

Origin of the different sorts.—It is evident from the nature of the distinctions of the two races of wild neat cattle, which have been above described, that all the various kinds of such cattle now existing in this or other countries in the domesticated state have originally proceeded, and are derived from one or other of those races. The *urus*, or wild bull sort, has given rise to all or most of the different kinds which are met with in this kingdom and other parts of Europe, as well as in all the cold northern regions: and the *bison*, or hunched kind, has been the origin of all or most of the various sorts which now inhabit the warmer southern climates of the earth.

The descendants of each of these races gradually acquired additional points of distinction, in consequence of differences of situation, and diversity of food, the deviations and aberrations of nature, the capriciousness of keepers and managers, and other accidental circumstances; and from these causes have been produced all those natural varieties which are to be met with in this sort of cattle.

Again; as the art of cattle management became more generally and better understood, the value of the points or parts of the different sorts of stock were ascertained, and it was discovered that by a combination of the rules of art with natural means, each of these distinctive points might be improved, and these improvements might be multi-

plied, until the breed attained that state which was considered most valuable or desirable. Thus it will be seen, that in process of time a multiplied variety of natural and improved sorts of neat cattle have been raised, which in their forms and qualities have little resemblance or relation to the race from which they originally proceeded.

No certain information can now be obtained respecting the original breeds of this country; a conjecture, however, may be hazarded, that in the more hilly regions and low valleys, it consisted of the small hardy kinds, and long and middle-horned varieties, without any of the short-horned, which, it seems probable, have been subsequently introduced into England from the opposite continent. The ground of this conjecture is the circumstance, that those breeds, such as the Highland, the Welsh, the North Devon, and the Lancashire long-horns, have from particular causes remained without much alteration by the admixture of any other kinds. In the opinion of some persons, however, the long-horned sort was originally brought into this country from Ireland, because the native stock of that island consists wholly of that breed; but on these points we have no better authority than conjecture. The breed which, on account of having no horns is termed the *polled*, is ascribed by some persons to Poland; but it is probable, as a want of horns is a part of the generic character, that a mixture of this sort of cattle might formerly have existed in this country, though now so blended and intermingled with others, as to leave no possibility of discovering the original.

We mentioned a few days ago, a singular freak of nature, that a female mule belonging to a gentleman in Suffolk, had proved with foal, and actually brought forth. The fact being doubted by several gentlemen here, we have thought it worth the trouble to enquire more particularly about it, and have now before us a letter from the proprietor of the mule, (J. T. Kilby, Esq.) fully confirming our statement, and giving the following particulars:—The mule was kept constantly at hard labor, except on Sundays, when she was turned into a pasture in which was a two year old horse, between which and the mule an intimacy was contracted, which led to the result we have alluded to. The issue of the mule at the delivery, was so poor and feeble, that for some time it could not stand; but it soon began to thrive, and is now in fine order. It approximates nearer to the horse than the mule species. The proprietor of the mule, though he had remarked her increased bulk, little imagined the true cause, but believed it to have proceeded from over-feeding, and continued to keep her constantly at work, up to the very moment of parturition, the signs of which actually occurred while the animal was in gear! Of course he was not a little surprised and puzzled at the discovery, as well as hurt at the reflection that he had unwittingly subjected her to laborious duty, contrary to the laws of nature and the dictates of humanity.

The dam and her youngling are kept in a clover lot, and looked after with the utmost care and tenderness. They attract a great many visitors, from the generally received opinion that mules are incapable of breeding. It is curious to observe the fondness and solicitude of this creature for her offspring: she will allow no one to go near it, nor even to approach the fence, without flying at them like a virago, with looks which seem to say "begone! if you know when you are well off."—She is of a grey color, 10 years old this Spring; out of a Dixon mare, by a small Jack which belonged to Messrs. Cohoon and Minton, of Nansemond County.—*Nor. Her.*

MISCELLANEOUS.

Curious Astronomical Theory.—We state the following on the authority of M. Arago, an eminent French astronomer:—if we place in a horizontal line the series of figures of which the law is evident,

0 3 6 12 24 48 96 192

(each double the preceding,) and afterwards add 4 to each, we shall have a series denoting the relative distances of the planets from the sun, thus:—

4 7 10 16 28 52 100 196

Mer. Ven. Earth. Mars.....Jupiter. Sat. Ura.

If 10 represents the distance of the Earth, 4 will be that of Mercury, 7 Venus, 16 Mars, and 52, 100, and 192, the respective distances of Jupiter, Saturn, and Uranus. This law was known as far as 100 before the discovery of Uranus; and the distance being found to correspond, affords a very remarkable confirmation of its truth. But it will be observed there is a deficiency of one term between Mars and Jupiter. This led philosophers to suspect the existence of a planet at the distance required to fill up the vacancy, and in 1801, Piazzi, of Palerino, actually discovered one, whose orbit was between those of Mars and Jupiter, and nearly at the proportionable distance of 28 from the Sun. This planet was named Ceres; and since that period three others have been found—Pallas, Juno, and Vesta, all of which have their orbits so near each other as to lead astronomers to believe that these are the fragments of a larger planet, which had been shattered into pieces by some internal explosion, or the shock of a comet. —*London paper.*

One Animal preys on Another.—A large Hake was lately taken on the coast of England in which was found a clever sized Codling. On opening the codling a small Ling was found, sepulchred in his maw. On opening the Ling, an angle worm and several marine insects were found established in close quarters.

A Novel Law Point.—The Supreme Court of Mass., at its law session in that city in March, decided that a grand child born eight months and a half after the death of his grand father, is included in a bequest to grand children '*living at his decease.*'

A Long Nose.—A Paisley manufacturer having got, by some accident a severe cut across the nose, and having no court-plaister at hand, stuck on his unfortunate proboscis one of his gum tickets on which was the usual intimation—"warranted 350 yards long."

Chemistry in the Kitchen—Why is it necessary to mix lime with ashes in soap making? The answer to this question will explain the reason why the process often fails, and suggest a remedy for the evil. Common soap is a compound, chemically united, of alkali, or ley from potash, and grease, fat or tallow. The alkali is naturally combined with carbonic acid, for which it has a stronger affinity than it has for grease; hence while it continues united with the acid, it will not unite with the grease, and produce soap. But lime having a stronger affinity for the acid than the alkali has, extracts it from the ley, and the alkali then readily unites with the grease, and forms soap. From this it will be seen, that the lime should be spread over the bottom of the leach tub in order that the ley may filter through it: and also that the lime be fresh burnt, as then it has a greater capacity for the acid.— *Cultivator.*

It is computed that the number of deaths throughout the globe, in 33 years, is equal to the whole number of inhabitants. If we compute the population of the earth at 700 millions, and the number of *births* in proportion to the number of inhabitants as 1 to 29 1-2, and *deaths* as 1 to 33, we shall have the following results, nearly:

	Births.	*Deaths.*
In a year,	23,729,000	21,212,000
In a day,	65,000	58,000
In an hour,	2,700	2,400
In a minute,	45	40

According to this calculation, the total annual increase of the population of the globe, were it not checked by war and epidemics, would amount to 2,517,000.

Such is the frailty and uncertainty of human life, that nearly one quarter of those who are born die the first year; as many as one third, the first two years; and only about one in ten arrives at the age of 70 years.

Vegetable Silk.—There is at present considerable activity in a new branch of industry at Paris. We allude to the manufacture of carpets, and various other articles of general use, from a substance first imported into France by M. Pavy, to which he has given the name of vegetable silk. This substance has, in fact, an appearance very similar to silk, and can be employed as its substitute in a variety of cases. It is white, and can receive dye of any color. This vegetable is gathered in shoots of from 15 to 20 feet in length, and is of such strength that four of these shoots plaited together, will bear a weight of 40 pounds.

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The Season—Pinching off Potatoe blossoms—Important Improvement—Proclamation to the Locusts—Morus Multicaulis—Bears—Productive Small Farm—Snow in May—Valuable Cargo—Hydro Oxygen Microscope—Cultivation and Management of the Tobacco Crop—Cultivation of Grass at the South—Native Grasses—Synopsis of James Trundle's Mode of Agriculture—On the Coiling system of Cultivating the Vine in Pots—Ruta Baga and Mangel Wurtzel—On the Culture of the Garden Bean—Live Stock and Cattle Management—A Foal of a Mule—Curious Astronomical Theory—One Animal Preys upon Another—A Novel Law Point—A Long Nose—Chemistry in the Kitchen—A Computation of Births and Deaths—Vegetable Silk.

BALTIMORE PRODUCE MARKET.

☞ *These Prices are carefully corrected every* WEDNESDAY.

	PER.	FROM	TO
BRANDY, Apple,	gallon.	$0 27	$—
Peach,	"	75	—
BEANS, white field,	bushel.	1 50	1 75
BEEF, on the hoof,	100lbs.	6 50	7 00
CORN, yellow,	bushel.	57	58
White,	"	57	58
COTTON, Virginia,	pound.	10	12
North Carolina,	"	11	12½
Upland,	"	11	14
FEATHERS,	pound.	36	37
FLAXSEED,	bushel.	1 00	1 25
FLOUR—Best white wheat family,	barrel.	6 50	7 00
Do. do. baker's	"	6 00	6 50
Do. do. Superfine,	"	5 25	5 37
Super Howard street,	"	4 87	5 00
" " wagon price,	"	4 75	— —
City Mills, extra,	"	5 27	5 37
Do.	"	4 75	4 87
Susquehanna,	"	5 00	5 12
Rye,	"	3 37	3 50
GRASS SEEDS, red Clover,	bushel.	3 50	4 00
Timothy (herds of the north)	"	2 50	—
Orchard,	"	3 50	—
Tall meadow Oat,	"	2 50	—
Herds, or red top,	"	1 25	—
HAY, in bulk,	ton.	15 00	17 00
Pressed,	100 lbs	70	1 00
HEMP, country, dew rotted,	pound.	6	7
" water rotted,	"	7	8
LIME,	bushel.	30	35
OATS,	"	31	33
OIL, linseed,	gallon.	85	— —
PEAS, red eye,	bushel.	80	—
Black eye,	"	90	1 00
Lady,	"	95	1 00
PLASTER PARIS, in the stone,	ton.	3 25	—
Ground,	barrel.	1 37	—
RAGS,	pound.	3	4
RYE,	bushel.	68	69
TOBACCO, crop, common,	100 lbs	3 50	5 00
" brown and red,	"	4 50	6 00
" fine red,	"	6 00	8 00
" wrappery, suitable for segars,	"	6 00	12 00
" yellow and red,	"	8 00	12 00
" yellow,	"	13 00	17 00
" fine yellow,	"	15 00	22 00
Seconds, as in quality,	"	4 00	5 00
" ground leaf,	"	5 00	9 00
Virginia,	"	4 00	—
Rappahannock,	"	3 00	4 00
Kentucky,	"	4 00	8 00
WHEAT, white,	bushel.	1 10	1 15
Red,	"	1 00	1 12
WHISKEY, 1st pf. in bbls.	gallon.	23½	24½
" in hhds.	"	21	21¼
" wagon price,	"	20	—
WAGON FREIGHTS, to Pittsburgh,	100 lbs	1 50	—
To Wheeling,	"	1 62	—
		washed.	*unwash*
WOOL, Prime & Saxon Fleeces,	pound.	50 *to* 60	24 *to* 26
Full Merino,	"	40 50	20 24
Three fourths Merino,	"	33 40	18 20
One half do.	"	27 33	16 18
Common & one fourth Meri.	"	22 27	16 18
Pulled,	"	25 30	16 18

Peas and Beans are scarce and much wanted.

DEVON CATTLE.

THE subscriber has the selling of a considerable number and variety of these valuable cattle at prices *unusually low*, viz: Bulls from 75 to $100; Cows and Heifers from 60 to $80, and Calves, one year old and less, from 40 to $60. More particular information may be had by application to I. I. HITCHCOCK,
May 9. American Farmer Establishment.

GAMA GRASS SEED.

A SMALL quantity just received, and for sale at 50 cents per ounce, by
I. I. HITCHCOCK,
May 30. American Farmer Establishment.

BALTIMORE PROVISION MARKET.

	PER.	FROM.	TO.
APPLES,	barrel.	$—	$—
BACON, hams,	pound.	10	—
Shoulders,	"	—	8
Middlings,	"	—	8
BUTTER, printed, in lbs. & half lbs.	"	25	31
Roll,	"	12	14
CIDER,	barrel.	—	—
CALVES, three to six weeks old	each.	3 00	6 00
Cows, new milch,	"	15 00	27 00
Dry,	"	9 00	12 00
CORN MEAL, for family use,	100lbs.	1 30	1 35
CHOP RYE,	"	1 50	1 56
EGGS,	dozen.	12	—
FISH, Shad,		—	—
" salted,	barrel.	6 37	—
Herrings, salted, No. 1 & 2,	"	3 62	3 75
Mackerel, No. 1, 2 & 3,	"	4 75	6 25
Cod, salted,	pound.	3	—
LAMBS, alive,	each.	1 25	2 00
Slaughtered,	quart'r	37½	75
LARD,	pound.	8	—
POULTRY, Fowls,	dozen.	2 25	2 50
Chickens,	"	2 00	2 25
Ducks,	"	87	1 50
POTATOES, Irish,	bushel.	75	—
Sweet,	"	—	—
VEAL, fore quarters,	quart'r	50	75
Hind do.	"	75	1 00

ADVERTISEMENTS.

THE 7-8 SHORT HORN DURHAM BULL "DUKE" IS FOR SALE.

DUKE is 2 years old, red and white, by Parson, dam Isabella; Parson is by Bishop, dam, Moss Rose, (imported in 1821, bred by Mr. Ashcroft,) got by Phenomenon—Isabella is by the celebrated imported bull Lothario, dam, Meg, by Billy Austin. Duke is of uncommon fine size and figure, pronounced by judges to have every point and appearance of a full bred. Price (to suit the times) $150.

Also—Several 3-4 blood HEIFERS, with their first calves, will be disposed of at $100 each. Application to be made (post paid) to I. I. HITCHCOCK,
May 30 American Farmer Establishment.

IMPROVED STOCK.

FOR SALE—A full blood Durham improved short horned BULL, two half blood yearling BULLS, also several half and three 'quarter blood HEIFERS of different ages. These cattle are immediately descended from the stock of the late R. Colling (of England) a celebrated breeder.

Apply to the Editor, or at the farm of the proprietor, near Taneytown, Frederick county, Maryland.
May 30 4t C. BIRNIE.

NOTICE.

I WILL sell my FARM on South River, at private sale. It contains upwards of a
THOUSAND ACRES,
and possesses more advantages than most farms. Any information which may be required will be afforded to those who will call upon me at my residence in this city, or on H. H. Harwood, Esq. at the Farmers' Bank of Maryland.
RICHARD HARWOOD of Thos.
Annapolis, May 30, 1834.

A FINE JACK AND JENNY—FOR SALE.

I HAVE the selling of a fine Jack and Jenny, which measure as follows, viz:

The Jack is of the extraordinary height of fifty-seven and a quarter inches, and was eight years old last spring.

He was imported from Malta, by Mr. C. Thorndike, of Boston, and is unquestionably one of the largest and most valuable animals of the kind in the United States. Price $800.

The Jenny is eight or nine years old, (not more,) is fifty and three-quarter inches in height, and a fine animal. While the above is the *lowest price* for the Jack, I will sell the two together for $1000. Letters in regard to these animals (post paid) will be promptly auswered. Either of the animals will be sold separate from the other, if desired. I. I. HITCHCOCK.
May 30. American Farmer Establishment.

CUBA TOBACCO SEED.

JUST received from Matanzas, a few ounces of the true Cuba Tobacco Seed, from *la Vuelta Abajo*, warranted in prime order—Price $1.00 per ounce.
I. I. HITCHCOCK.
May 30. American Farmer Establishment.

DUTTON CORN.

THE subscriber has procured a small quantity of this celebrated variety of Corn. The following is the description of it, by Judge Buel, of Albany, N. Y.

"*In making a choice of sorts*, the object should be to obtain the varieties which ripen early, and afford the greatest crop. I think these two properties are best combined in a twelve rowed kind which I obtained from Vermont some years ago, which I call Dutton corn, from the name of the gentleman from whom I received it. It is earlier than the common eight-rowed yellow, or any other field variety I have seen, and at the same time gives the greatest product. I have invariably cut the crop in the first fourteen days of September, and once in the last week in August. The cob is large, but the grain is so compact upon it, that two bushels of sound ears have yielded five pecks of shelled grain, weighing 62 lbs. the bushel."—[*American Farmer, vol.* 15, *page* 43.

I. I. HITCHCOCK,
May 30. American Farmer Establishment.

IMPROVED SHORT HORNS.

MR. POWEL having left his farm, offers for private sale, his stock of improved short horned CATTLE, all of which have either been imported by him, or bred on his farm from animals selected for him in England.
Direct to WILLIAM COUCHES,
Care of John Hare Powel, Esq.
Powelton, April 17th, 1834.—May 9 9t

A JACK FOR SALE.

I HAVE the selling of a fine JACK, nine years old, whose mules are excellent. He was imported from Gibraltar four or five years ago, and is now offered for sale for want of use by his present owner.

He is upwards of 12½ hands high, stout and well made. Price $250. Enquire of I. I. HITCHCOCK,
May 9. American Farmer Establishment.

WOOL.

LYMAN REED & CO. Commission Merchants, No. 6 S. Charles street, Baltimore, Md.—devote particular attention to the sale of WOOL. All consignments made them will receive their particular attention, and liberal advances will be made when required. May 9.

FRESH GARDEN SEEDS—NEW STOCK.

THE subscriber has now on hand a very extensive and complete assortment of GARDEN SEEDS, which he ventures to recommend to his customers and the public as *good* in every respect. He is prepared to execute orders either for dealers or families at the most reasonable rates at which *first rate articles* can be obtained.

AGENCY—He also acts as agent for the procurement of CLOVERSEED and various GRASS SEEDS whenever he has them not in store; also Agricultural IMPLEMENTS, Fruit and Ornamental TREES, SHRUBS, GRAPEVINES, &c. Orders for these must be accompanied by either cash, or directions to draw for it when the articles are shipped. He also attends to the purchase and sale of CATTLE and other domestic animals.
May 19. I. I. HITCHCOCK.

POINTERS.

FOR SALE, several Pointer Puppies, littered 22d Nov.; they are of the very best blood, and are all most beautifully formed, and marked, being white with liver spots.
Price $10 each. Apply to I. I. HITCHCOCK.

WANTED,

BUCKWHEAT FOR SEED, by
I. I. HITCHCOCK,
May 9. American Farmer Establishment.

SUBSCRIBERS can have their volumes of the AMERICAN FARMER neatly half bound and lettered at this establishment, at 75 cents a volume. Most of the Nos. can also be had at 10 cents each, to complete files.

☞One set of the AMERICAN FARMER complete, in 15 vols. half bound and lettered, may be had at this establishment for $60. May 9.

Printed by SANDS & NEILSON, S. E. corner of Market and Calvert-streets.

THE FARMER & GARDENER;

AND LIVE-STOCK BREEDER & MANAGER.

CONDUCTED BY I. IRVINE HITCHCOCK, AND ISSUED EVERY FRIDAY FROM THE AMERICAN FARMER ESTABLISHMENT, AT $5 PER ANNUM, IN ADVANCE.

No. 5. **BALTIMORE, JUNE 6, 1834.** **Vol. I.**

☞This publication is the *successor* of the late **AMERICAN FARMER,** (which is discontinued,) and is published at the same office, at five dollars per year, payable in advance.

American Farmer Establishment.

BALTIMORE: FRIDAY, JUNE 6, 1834.

A RARE CHANCE FOR FARMERS AND VICTUALLERS.—A pair of remarkably fine working Oxen, 5 years old, and several fat oxen, all for sale, are expected to arrive in Baltimore to-day by the steam boat Kentucky. They are from the celebrated grazing farm of John Barney, Esq. in Delaware, whose fame for fine stock, especially cattle and sheep, is well known to our readers. Mr. Barney will remain a few days in Baltimore, and may be consulted in regard to these animals and other of his stock, at our office.

Mr. B. will also have with him a fine Bull, of the Durham short horn breed, but he is already sold. Gentlemen wishing either to purchase or to view these samples, shall be directed where they may do so, on application at our Store, in Calvert street.

MILLET.—The late frosts, and backwardness of the grass crop, has caused much inquiry to be made for Millet seed;—we have obtained a supply for our customers—see advertisement.

For making up a deficiency in the crop of grass, there is, perhaps, no article at the command of the farmer, better calculated than Millet. It is valuable for cutting and feeding in a green state; and it may be brought in at a time when it is difficult to obtain other food for horses and working oxen.

To raise this grass successfully, requires much attention to the preparation of the ground. A sandy loam is, perhaps, best adapted to its nature, when rich, and having a good proportion of fine impalpable powder in its composition; but any tolerably dry soil will answer, if well pulverised, which, we believe, is a *sine qua non* in the culture of this grass;—perhaps nothing will better pay for good culture and plentiful manure than the article mentioned. One bushel and a peck of seed should be sowed to the acre—from the 20th of May to the middle of June for the first crop, and about the middle of August for a second crop.

MUSTARD.—In another column of our paper we have given an account of the cultivation of Mustard; an article well worthy of the attention of agriculturists. It may be as easily raised as wheat, rye, or any of the annual crops, which we are in the habit of raising—it is not so great an exhauster of the ground—is much easier harvested—and at prices which we *sometimes* see it quoted in our price currents, it would realize a profit to the cultivator of twenty times greater amount than wheat would do off of the same ground. Notwithstanding the great depression in the prices of our agricultural productions in foreign markets, yet we are permitting the farmers of England and of the Rhine to tax us heavily for this, and many other articles which are equally adapted to our own climate and soil, as to those which produce them. This ought not to be. We have seen it quoted as high as twelve dollars per bushel, though less than half that price, might make it an object worth attending to, as we understand it has produced twenty bushels to the acre.

There is a manufactory of the article in this city, and at present it is under the necessity of standing still until some German emigrants come over with a supply of the seed. The foreign seed is often mixed with the seed of the wild mustard, *sinapis arvensis*, which grows wild along the road side, and is useless as a condiment.

The seed of the Sinapis Nigra may be had at the seed store attached to the establishment of the Farmer and Gardener, which is the kind preferred by the manufacturer, and the kind from which all the mustard used on our tables is manufactured. An oil is expressed from this seed, which renders the spicy qualities of the article as a condiment more pungent and durable in its effects.

A STRIKING CONTRAST.—The following is from the United States Gazette of Thursday:—

"A friend who came into Albany last week, from Schoharie county, mentions to us that the passengers were frequently invited to turn out and help the driver to get the stage through the snow drifts; and it was added, that a woman, on Thursday, the 12th of May, in attempting to go from one dwelling to another, on the Haelden barracks, became chilled, stopped on the road, and was frozen to death.

On Thursday, the 22d (just one week after the above intense cold,) the *heat* was such in this city as to be quite oppressive. At sunrise the thermometer was up to 70; at 4 o'clock, P. M. it stood at 84; and at 8 o'clock, P. M. at 80.

The contrast was almost as great, however, between the weather *here*, on the 15th and 22d, the difference of temperature, in the mornings of those two days, being no less than forty degrees!

NEW INVENTION.—We have examined the drawing of a machine to gather grain as it stands in the field without cutting. It is called the Locomotive Thresher; intended to be moved by horse power, and with the assistance of three men or boys of fifteen years of age, is calculated to go over ten acres of wheat or other grain per day, and gather say two hundred bushels, leaving the straw standing on the ground threshed as clean as is generally done in the ordinary way, thereby saving all the expense of harvesting; and by ploughing in or burning the straw, it is supposed the ground may be tilled *ad infinitum* without diminishing its fertility. Should this invention succeed, it will afford another inducement for farmers to inhabit and cultivate those beautiful prairies which abound in the far West. The ingenious inventor is Mr. John T. Vail, of La Porte, Indiana, formerly of this town.—*Rahway Advertiser.*

PRESERVING BACON—There is much said about preserving Bacon. I have noticed in all the communications on the subject, that it is recommended to have the Bacon *well dried;* and I think this is the principal thing required. If bacon is not well dried, there is nothing that it can be packed in, that will keep it sound. When Bacon is hung up for drying, boards or plank should be laid on the joists over it, in order to keep dirt or dust from falling on it, also to keep the smoke from escaping too soon. A smoke should be kept under it till it is thoroughly dry, and be continued in wet weather in the summer. Whoever will follow this plan will save their bacon.—*Louisville, Ky.* B. C.

A firm of brick-makers, in Mount Vernon, Ohio, have succeeded in getting a new brick machine into operation, and with complete success. It operates by pressure, and manufactures, as the Mount Vernon Gazette states, the very best quality of bricks out of *dry clay.* There is a pressure of more than fifty tons upon every brick; it comes from the press as smooth as plates of polished steel can produce. One horse makes twenty such pressures in a minute.

The itch is caused by an insect, white, with eight reddish legs, to the four hind ones of which is appended a bristle. It may he distinguished with the microscope, in the vesicles, in the joints, which accompany the disorder.

THE FARMER.

[From the Domestic Encyclopedia.]

MUSTARD, or *Sinapis*, L. a genus of plants, comprising nineteen species: three of which are natives of Britain: namely,

1. The *arvensis*. See CHARLOCK.

2. The *alba*, or WHITE MUSTARD, which grows in corn-fields, and on road-sides; it flowers in the month of August. This species, when cultivated, thrives best in a soil that is naturally heavy, but which has been reduced to a fine mould, by tillage: it is propagated by sowing one bushel of the seed per acre, in the month of March; it should be frequently hoed; and, when the plants arrive at a proper size for transplantation, they may be set out, ten inches apart. Mustard may be sown on the same land, for three successive years; and it always leaves the soil in a sufficient tilth for the reception of any crop. Its leaves afford a grateful food to sheep, and other cattle: the seed yields from every cwt. 33 or 36 lb. of a sweet, mild oil. Bees are remarkably attached to the flowers. This plant is likewise raised by gardeners in the winter and early in the spring, with a view to supply the table with salad.

3. The *nigra*, or COMMON MUSTARD, growing in corn-fields, on ditch-banks, and on road-sides; flowering in the month of June. The sauce called *mustard*, and in daily use at our tables, is prepared from the seeds of this species, obtained by culture, and reduced to powder. They likewise afford a considerable quantity of expressed oil, which partakes but little of the acrimony of the plant. When unbruised, they impart a very weak flavour to boiling water; but, in a pulverised state, they coagulate milk, and strongly impregnate both fluids. If a watery infusion be taken in a considerable quantity, it operates as an emetic; but, in the proportion of a table-spoonful or two, it is a gentle laxative; in this form, it has proved of service in cases of asthma, chronic rheumatism, and palsy. Cataplasms, prepared with crumbs of bread, vinegar, and pulverised mustard seed, are excellent stimulants when applied to benumbed or paralytic limbs; to parts affected with fixed rheumatic pains, and to the soles of the feet, in fevers that require such treatment. In short, mustard acts powerfully upon the nervous system, without exciting a high degree of heat: by its acrimony and pungency, it stimulates the solids, so that it is deservedly recommended for exciting appetite, assisting digestion, and promoting the fluid secretions, being greatly preferable to the generality of acrid plants of the *anti-scorbutic* class.

[From the Genesee Farmer.]

FENCE POSTS.

In a late number of the Farmer, I recommended the cultivation of the locust, believing it to be the most valuable timber for fence posts. Since I penned that article, I have reflected much on the subject, and have been led to the conclusion, that by the use of strong alkalies, several kinds of timber abounding in our country may be rendered durable in the ground.

An intelligent farmer of Cayuga county informed me, that when he entered on his farm, about thirty years ago, there stood on it a building which had been used as a potashery, and against which lay a large quantity of leached ashes. On removing it, within a few years, he found that one of the posts, on the side next the ashes, was of *basswood*, and, to use his own expression, as sound as when put in.

In building our fine packet ships, the spaces between the timber and ceiling and outer planks, are filled with salt, it having been ascertained to render the wood imperishable. In article, page 91 of 1st vol. of the Farmer, it is stated that "the Shakers at Union village have been in the habit of making oak posts as durable as locusts, by a very simple and easy process. This is merely to bore a hole in that part of the post, which will be just at the surface of the earth, with such a slope as will carry it just below the surface, and fill it with salt."

With the exception of the red cedar, which is found on the islands and shores of our lakes, we have no timber that will remain sound in the ground many years, unless measures are taken to neutralize the acid contained in the wood, in the part buried in the earth. It appears, by the above statements, that the ley of wood ashes, and salt, have that effect; and we have reason to believe that lime would answer the same purpose. But which will answer best can only be obtained by experiment. Query—Does not the ley, salt, and lime, drive out and occupy the place of the natural moisture? I believe it to be a fact well established, that seasoned posts are more durable than green ones, and conclude the reason is, that there is much less of the acid remaining.

I will now propose to the readers of the Farmer, that those of us who have leisure and opportunity, should make the following experiment: Procure sound oak, chestnut, or white cedar posts, and when they are well seasoned, divide them into three parts. Of that part to be put in the ground, let one-third be in strong ley, one-third in a strong brine, and one-third in lime water, a sufficient length of time to neutralize the acid. Or, if this be attended with too much trouble, set one third with leached ashes, to within six inches of the surface, then strong ashes—let one-third have salt applied, as done by the Shakers, and the other surface to be set with lime from the surface to the depth of six inches, for it is at the surface of the ground that posts decay. By such an experiment, in addition to the benefit to ourselves, we should have the pleasing reflection that we have rendered one to the country at large.

I should be sorry if the above suggestion should divert the attention of any of our farmers from the cultivation of the locust, my only object in penning this being to inform them how to supply themselves with durable posts until their locusts shall have obtained a proper size.

Several writers for the Farmer have asserted that posts last much longer if the end which was upwards when growing be put in the ground. I consider this worthy of further experiment.

ONTARIO.

[From the Penny Magazine.]

BUTTER.

The various circumstances attending the introduction and use of butter in antiquity have been investigated by Beckmann, with great learning and industry. The conclusion at which he arrives is, "that butter was not used either by the Greeks or Romans in cooking, as is every where customary at present. We never find it mentioned by Galen or any other ancient medical writer, as *food*, though they have spoken of it as applicable to other purposes. No notice is taken of it by the Roman epicure, Apicus, who wrote on cookery; nor is there any thing said of it in that respect by the authors who treat of agriculture, though they have given us very particular information with respect to milk, cheese, and oil.

"This as has been remarked by others, may be easily accounted for, by the ancients having accustomed themselves to the use of good oil; and in like manner butter is very little employed at present in Italy, Spain, Portugal, and the southern part of France." Butter is very extensively used in this and most other northern countries; that of England and Holland is reckoned the best.

The production and consumption of butter in Great Britain is very great. The consumption in the metropolis may, it is believed, be avaraged at about one half pound per week for each individual, being at the rate of 20 lbs. a year;—and supposing the population to amount to 1,450,000, the total annual consumption would (on this hypothesis) be 37,700,000 lbs. or 16,830 tons; but to this may be added 4,000 tons for the butter required for the victualling of ships and other purposes, making the total consumption in round numbers 21,000 tons, or 47,040,000 lbs. which, at 10*d* per lb. would be worth £1,960,000.

The avarage produce per cow of the butter dairies is estimated at 168 pounds a year; so that supposing we are nearly right in the estimate, about 280,000 cows will be required to produce an adequate supply for the London market.

Butter made in hot countries is generally liquid. In India it is called *ghee*, and is mostly prepared from the milk of buffaloes; it is usually conveyed in duppers or bottles made of hide, each of which contains from ten to forty gallons. Ghee is an article of considerable commercial importance in many parts of India.

The Arabs are the greatest consumers of butter in the world. Bucknard tells us, that it is a common practice among all classes to drink, every morning, a cupfull of melted butter or ghee; and they use it in an infinite variety of other ways. The taste for it is universal, and even the poorest individuals will spend half their daily income that they may have butter for dinner, and butter in the morning. Large quantities are annually shipped from Cosseir, Sonakin, and Massona, on the west coast of the Red Sea, Djidda, and other Arabian ports.

[From the Genesee Farmer.]

PLANTS DERIVE MOST OF THEIR CARBON FROM THE AIR.

"E." doubts if plants derive most of their carbon from the atmosphere. He says, "Minerals of themselves cannot impart fertility." On what principle then would he explain the fact, that some soils are perpetually fertile? The carbonacious parts, under a system of severe cropping, are soon exhausted.

Is "the quantity of carbonic acid gas in the atmosphere *about the same at all times and in all*

places?" Professor *Brande* says, "Atmospheric air contains other substances, which, however, may be regarded as *adventitious*, and the quantity of which is *liable to vary ;* of these carbonic acid [is one of] the most important—*varying in quantity from* 1 *to* 0-1 *per cent.*" This shows a difference of from 10 to 1 ; but Dr. *Turner* makes it much greater. He says, "Carbonic Acid never exceeds 1 in 1000 parts [of the atmosphere] provided there is a free circulation of air ; and generally amounts only to 1-1000 or 1-2000 of the whole. I leave "E." to draw the inferences.

There are *several kinds* of prairies in the west; and all have *not* "a herbage whose roots form a perfect matter (as "E." supposes) upon the surface." One of the most fertile has for a long period been checked over with *naked spots*, situate between bunches of perennial weeds and of coarse grass. Its *blackness* is almost the only thing that would lead us to suspect the presence of vegetable matter, which, however, is a fallacious guide ; and this becomes evident when we subject the soil to experiment. On removing the sand, and burning the finer parts, it loses very little in quantity, and from *black* turns to a *reddish brown.* It therefore cannot be much indebted for its extraordinary fertility when cultivated, to carbonaceous matter. 'One crop of corn would contain many times as much carbon as had previously existed in this soil.'

Plants are not equally healthy in all soils ; and if not healthy on the Hempstead sands, they cannot flourish, though food may be presented by every particle of air that approaches. The richest pasture will not fatten a sick ox.

Does "E." believe that plants feed on "organic matter ?" If so, where are the proofs, independent of speculation and conjecture ?

Some meadows are mowed for a long series of years ; tons after tons are carried off, and no manure returned to supply the waste; yet these meadows are not impoverished, and no diminution of their fertility is observable. The soil contains as much carbonaceous matter as it did at the commencement; and we can only refer to the atmosphere as the grand store-house from which vegetation has drawn its supplies.

It is obvious to common sense that a reservoir that is constantly receiving, must approximate towards fullness, except it has some vent or outlet. Now the atmosphere is a reservoir into which carbonic acid gas is continually pouring from almost every part of the earth's surface—from combustion, and from fermentation ; yet there is no reason to believe that it now contains more than it did two thousand years ago. Where then is the outlet to this reservoir ? "*The only known process,*" says Dr. *Turner*, "which tends to prevent an increase in its proportion [of carbonic acid] *is that of vegetation.*" An Observer.

When I see a girl reject the addresses of a respectable young man, who owns a farm, goes to meeting, and pays his debts, for one who visits the theatre, and spends his money faster than he earns it, I think to myself, she has not got much gumption.

Although the tongue has no bones, it breaks bones.

THE GARDENER.

Flowering Bean.—The flowering bean is little known in this country, other than as an ornament. We are informed by an experienced gardener from England, that it is there considered as the most valuable of all their pole beans ; and much more in use than the horse or Lima bean. Its great value consists in its coming in after the common string beans are done with, and will then continue to give a plentiful supply of green pods, in which way it is to be used, until the frost destroys it, and it will stand a harder frost than any other of the kind. It furnishes the best bean for pickling.

HORTICULTURAL SOCIETY.

At the anniversary meeting of the Horticultural Society of Maryland, held on the 10th of May, the following officers were elected for the ensuing year, (commencing on the first Saturday in June,) viz.

B. I. COHEN, *President.*
D. Hoffman, Z. Waters, Jos. King, Jr. J. P. Kennedy, } *Vice Presidents.*
Gideon B. Smith, *Cor. Sec.*
Philip T. Tyson, *Rec. Sec.*
E. Kurtz, *Treasurer.*

Counsellors.

Henry Schroeder,	Dr. Wm. Fisher,
Dr. Thos. Edmondson,	J. P. Kraft,
Samuel Feast,	John S. Skinner,
John Feast,	Charles C. Harper,
Evan P. Thomas,	C. Wethered,
William G. Thomas,	Dr. Julius T. Ducatel,
James Moore,	Geo. W. Dobbin,
Dr. A. B. Cleveland,	Samuel W. Smith,
Dr. R. W. Hall,	George Duncan,
Dr. Eli Geddings,	John B. Bastian,
E. W. Colburn,	George H. Keerl,
Dr. J. I. Cohen,	Alexander Lorman.

The following are the standing committees of the Council for the ensuing year :

On the Culture and Products of the Kitchen Garden—E. P. Thomas, chairman ; James Moore and John Feast.

On Fruits, Fruit Trees and Vines—Geo. W. Dobbin, chairman ; Samuel Feast and R. Sinclair, Sen.

On Ornamental Trees and Shrubs, Flowers and Green Houses—Dr. Tho. Edmondson, chairman ; Edward Kurtz and Wm. G. Thomas.

On the Library—Dr. W. Fisher, chairman ; Dr. J. T. Ducatel and Dr. J. I. Cohen.

On Finance—Dr. Thos. Edmondson, chairman; E. P. Thomas, and C. E. Wethered.

Horticultural Society of Maryland.

Report of the Second Exhibition.

The second annual exhibition of the Maryland Horticultural Society was held on the 14th, 15th, and 16th May, in the spacious saloon of the Athenæum, and was attended with the most pleasing results, both to the Society and the numerous visiters ; so much so, indeed, that the Society have abundant cause to congratulate the citizens of Baltimore on the good effects of this infant association, already visible.

The collection of Culinary Vegetables was not very great, but there were several articles of unsurpassed excellence. The Cauliflowers presented by Thomas Dixon, gardener to Mrs. Donnell, of Willowbrook, were superior to any heretofore produced here, and equal to the best raised in Europe. The early York Cabbages presented by Thomas Doran, were unequalled by any heretofore produced at this season of the year. These two items indicate a spirit of industry, attention and skill, in their cultivators, highly creditable to them, and the Society deems the expression of its sense of their merits in this mode due them, in addition to the Society's medals. Nor should we omit to notice the Cauliflowers presented by Edward Keen, and Thomas Dorsey, and the early York Cabbages by the same, both of which were of excellent quality.

The following articles also were excellent, viz : superior Asparagus, by Peter Steuart ; Potatoes, Radishes, Asparagus and Lettuce, by Peter Nantz ; Radishes, by Thomas Doran ; Carrots, Cabbage and Lettuce, by Thomas Dorsey ; Cabbage and Lettuce, by Edward Keene ; Cucumbers, Potatoes and Helianthustuberosus, (Jerusalem Artichoke) by Lawrence Herring, gardener to Wm. H. Freeman, Esq. ; Radishes, Cabbage and Lettuce, by Caleb Whittemore; Cucumbers and Beans, by Mr. Wilhelm, gardener of John Ridgely, Esq. of Hampton ; a fine bunch of Rhubarb, (Rheum undulatum) by Gideon B. Smith, and Green Peas, by Robert Blanchard, gardener to Col. B. C. Howard.

Premiums awarded for the products of the Kitchen Garden.

For the best Cauliflowers, a silver medal valued at $5, to Thomas Dixon, gardener to Mrs. Donnell, of Willowbrook.

For the best Asparagus, forced, a silver medal, valued at $5, to Wm. Blanchard, gardener to Col. B. C. Howard.

For the best Asparagus, from the open ground, a silver medal, valued at $2, to Peter Steuart.

For the best Rhubarb, for tarts, a silver medal, valued at $5, to Gideon B. Smith.

For the best Carrots, a silver medal valued at $2, to Thomas Dorsey.

For the qest Lettuce, forced, a silver medal valued at $3, to George Duncan.

For the best Lettuce, open ground, a silver medal, valued at $2, to Edward Keen.

For the best Onions, from seed same year, a silver medal valued at $3, to Samuel Feast.

For the best Tomatoes, a silver medal valued at $3, to Charles Scheigle.

For the best Beets, a silver medal valued at $3, to Thos. Dorsey.

For the best Early York Cabbage, a silver medal, valued at $2, to Thos. Doran.

For the best bushel of Irish Potatoes, with mode of cultivation, the Amateur premium, a silver cup, valued at $10, offered by Dr. Thos. Edmondson, to Caleb Whittemore.

For the best Cucumbers and Snap Beans, a floating premium medal of $5, to Mr. Wilhelm, gardener of John Ridgely, Esq. of Hampton.

For the best new Potatoes, a floating premium medal, $5, to Peter Nantz.

For Cucumbers and Early Potatoes, a floating premium medal, $5, to Lawrence Herring, gardener to W. H. Freeman, Esq.

We notice with commendation, some very fine Rhubarb plants (Rheum raponticum,) and Garden Leeks, sent by Capt. Wm. P. Matthews, of the Eastern Shore of Maryland.

FRUIT.

The season of our exhibition was that of flowers, rather than fruit, and therefore we had but few objects of interest in this department, except from the green-houses. The severe frost in the latter part of April had materially retarded the Strawberries: notwithstanding which, however, we had some very fine specimens from Robert Dore, J. B. Smith, and J. Coates. It was too early for Gooseberries, but there were some fine specimens presented by Samuel Feast, consisting of about 25 select varieties, and by Richard Valentine, gardener to Robert Oliver, Esq. The latter were very large, and both those of Mr. Feast and Mr. Valentine afforded indications of great excellence when they shall have arrived at maturity. Fair specimens of the Catawba, Isabella, Bland, and Constantia Grapes, were exhibited by Robert Sinclair, Sen.

Of green-house fruit, the specimens were very superior, particularly the Lemons, Oranges, and Limes, of Mrs. Edmondson, Mrs. Emory, Miss Eliza Schrœder, Mr. Mann, and Mr. Ackerman, to each of whom the thanks of the Society are due for their exhibition.

Premiums awarded for Fruit.

For the best Strawberries, a silver medal, $3, to Robert Dore.

For the best Apricots, a silver medal, $3, to Andrew Clary, gardener to Major Isaac M'Kim.

For the best Grapes, (native,) a silver medal, $5, to Robert Sinclair, Sen.

For the best Gooseberries, a silver medal, $4, to Richard Valentine, gardener to Robert Oliver, Esq.

ORNAMENTAL DEPARTMENT.

In the ornamental department, we were relieved from the restrictions of the season and location, with which we were hampered in those of vegetables and fruits, and all climes and all seasons became tributary to our festival of flowers. The collection of rare and valuable exotics was very extensive, as also was that of indigenous plants. The following are some of the most prominent articles:

From the collection of Mrs. Edmondson, a Rhododendron-ponticum—a splendid specimen, in full bloom, the largest we have seen: a splendid Viburnum chinensis; Aloe arborea, 8 feet high; Ardisia crenata; several fine specimens of Pelargoniums, and various others.

From the collection of Mrs. Emory, a very large Strelitzis regina, a splendid collection of Pelargoniums, and fine specimens of Pittosporum tobira, carmine cluster rose, Banksia Grandis, and other species, Melaleuca, imbricata, Aster argophyllus, Daphne dauphine, &c.

From the collection of St. Mary's College, fine specimens of the Musa Sapieutum, and the Musa rosacea (Banana and Plantain tree) the latter in flower, Ficus nitida, Dracena fera, Encaliptus ovata, Holygala Speciosa, Bromelia Caracas, or Caracas pine apple, Protea Strobelina, several specimens of acacia, metrosideros in flower, Bannisteria fulgens, &c.

From the collection of Edward Kurtz, a splendid specimen of the Azalea indica, near six feet high and profusely covered with bloom. For this plant the Society's medal for the finest and rarest Exotic, was awarded to Mr. Kurtz, besides which he exhibited fine specimens of correa pulchella and virid flora, Lilium longiflorum, Thea bohea, and viridis, (bohea and green tea plant) Olea fragrans, seven splendid specimens of Pelargonium, Azelea cuprea and pontica pallida, Verbena mellindris, magnolia fuscuta and pumila, Ardisia crenata, Fuschia arborea, &c.

From the collection of George Ackerman, a splendid specimen of Cactus Speciosissimus, near five feet high, with two full blown flowers, and a large number of buds, and fine specimen of cactus Speciosus. These plants were in a fine state of perfection.

From the collection of Zebulon Waters, variegated, curled leaved, and China orange trees; 25 specimens of pelargoniums, 5 of aloes, 2 of canna indica, 2 of Phlox, Anemone thalictroldes, *double*, Cactus Speciosus and quadrangularis, Mimulus, moschata, Rhododendron poncticum, Hibertia, volubilis, Amarylliis rutila and fulgida, Malaxis, lilii, folia, Heliotropium peruvianum, Eugenia jambos and myrtifolia, Magnolia grandiflora and purpurea, &c.

From the collection of Mr. E. P. Thomas a fine cactus Jenkinsonia, Cupressus Sempervirens or Cedar of Goah, a most beautiful evergreen, which excited universal admiration, Cycus revoluta, Eugenia myrtifolia, Ruelila Speciosa, Magnolia purpurea, and fuscata, Pe largoniums of many varieties, Banksia cricoides, Myrtle leaved Orange, full of fruit, (a very fine specimen,) Ardisia cranata, &c.

From the collection of Mr. Wm. G. Thomas, a fine Metrosideros marginata, Rhododendron ponticum, Myrtle leaved Orange, in full fruit, Jasmimum revolutum, &c.

From the collection of Mr. Joseph King, jr. a fine specimen of Jasmimum revolutum, Punica granatum, Plumbago, capensis, &c.

From the collection of Mr. Geo. H. Keerl, a very fine Rhododendron ponticum, Pittosporum tobira, &c.

From the collection of Mr. B. I. Cohen, a splendid specimen of Ficus elastica, 25 feet high and well branched; Yucca aloefolia, ten feet high; Erithrina crista galli, Aloe corina, Dianella cerulea, Agabantpus umbellatus, Punica, granata, Justicia alhatoda, Albuca altissima, &c.

From the collection of Mr. Henry Schrœder, a very fine Yucca aloefolia, Cycas revolutum; Vinca major, a fine fig tree in full fruit, lemon tree, orange trees, &c.

From the collection of Mr. Robert Oliver, a splendid cactus tuna, 12 ft. in circumference, finely fruited, a fine air plant, Oncidium biflora, &c.

From the collection of Mr. Samuel Feast, a large number of rare and valuable plants, among which were fine specimens of Laurus cinamomum (cinnamon tree,) and camphora, (camphor tree,) Amaryllis Johnsoniensis and longiflora, Calceolaria salvifolia, Metrosideros, marginata and salicifolia, Cactus spiciosus, cylindricus, and Braziliensis, Escholizia, californica Erica pubescens minor and verticilata Brumia capitata, Bletia, Verucunda, Leptospermum Multiflora and Baratum, Geum chiliensis, acasia, armata augustifolia, &c. and several varieties, of Ixias, Strelitzia regina, Fuphorbia nerifolia, a large number of Pelargoniums of the most beautiful and rare varieties, Musa rosacea (Banana tree,) Sarracenia flava and variolus, Acacia heterophyla, Melaleuca pubescens, Calothamnus guadrifida, Eucaliptas ovata, Dracena fera, roso sempervirens, cactus Hexacanthus, &c.

From the collection of Mr. J. Feast, the number of specimens was also very large and rich; among them were Justicia persicifolia, Hesperis alba *pleno*, Budlea globossa; banksia cunninghamia, and verticellata, cassia, 2 varieties; Metrosideros grandiflora, styphilandis, &c. cactus speciosus, and many others; Aloe varigata and arborescens, Sac, charum, officinale, (sugar cane,) Magnolia fuscato, Rhododendron ponticum, Sterculia platanifolia, Bletia vericunda, Andropogon paniculata, many varieties of Erica, upwards of seventy varieties of Pelargoniums, (Geraniums,) Mango tree (Mangifera indica) several varieties of roses, clematis florida *peno* and purpurea, Renealmia nutans, Melalecua, 3 varieties; Pi tosporum tobira, Musa roacea, (Banana tree) Lilium martogon and longiflora. Moss rose, Protea tomentosa, Justicia coccinea and cerulia, Calothamnus guadrifida, &c.

From the collection of Mr. James Wilkes a fine champney rose, Pelorgoniums, Rhododendron ponticum, Viburnum nitidum, Ficus elastica, Westringearos marinifolia, &c.

From the collection of Mr. J. B. Bastian, a splendid specimen of Cactus Speciosissimus in bloom, Cactus Cylindrica, and hexangularis, Eugenia uniflora and Jambos, Plumbago capensis and rosea, and a fine collection of other plants.

From the collection of Mr. Thomas Dorsey, some fine specimens of Aster argaphyllus, geisomeria longiflora, Clematis florida, Thea bohea (bohea tea plant,) Calceolaria integrifolia, Jocobea elegans, gnaphaliums, rosa adamsonia, Ficus clastica, Jasmimum revolutum, Leptosperum, Nandina domestica, Bouvareia, tryphylla, Ixias gladiolus undulatus, Albuca altissima, Tradescamtia crassifolia, Pelargoniums, Aucuba japonica, Mesembrianthemum trinellum, Aloes, four varieties, Fuschia macrostema, &c.

Premiums awarded in the Ornamental Department.

For the best conducted Green house, a silver goblet valued at $20 to Mr. Samuel Feast.

For the best collection of Camellias, a silver cup valued at $10, to Mr. John Feast.

For the best collection of Pelargoniums, a silver medal $5, to Mrs. Thomas Emory.

For the best collection of Chrysanthemums, a silver medal $3, to Mrs. Geo. H. Keerl.

For the best collection of Primula Polyanthus, a silver medal $2, to Mr. John Feast.

For the finest and rarest Exotic, a silver medal $5, to Mr. Edward Kurtz.

For a choice and rare collection of green house plants in fine condition, the Society's optional premium, a silver medal $5, to J. B. Bastian.

On Thursday, 15th, at 12 o'clock, an elegant address was delivered by J. H. B. Latrobe, Esq. on the nature and objects of the Society, which was listened to with much pleasure, by a very

numerous audience of ladies and gentlemen. It is expected that the address will be published. At the conclusion of the address, the award of premiums was read; and in the evening the ceremony of distributing them among the successful competitors was performed, in which JOHN P. KENNEDY, Esq. officiated by invitation, to witness which, a very numerous company of ladies and gentlemen attended. The thanks of the Society are due to Mr. Latrobe and Mr. Kennedy for the very handsome manner in which they fulfilled the objects of their respective appointments.

The thanks of the Society are due to the many ladies whose contributions to the exhibition tended so much to enhance its value. In particular they may be permitted to refer to Mrs. Edmondson, Mrs. B. I. Cohen, Mrs. Emory, Mrs. Power, Mrs. Muschett, Mrs. Forney, Miss Eliza Schrœder, and Miss Moody.

The valuable contributions of Specimens and Seeds collected by Mendas I. Cohen, Esq. in Asia, Syria and Egypt, and presented to the society, attracted much and deserved attention. Among them was a Lupin, the seed of which was sent by Mr. Cohen from Egypt, already in bloom at the exhibition. The *Dhoura*, a species of the cereal grain of Egypt, and the Nubian cotton excited considerable interest.

A beautiful specimen of fine cloth, made from the fibres of the leaves of the pine apple, from Manilla, resembling the finest linen cambric, was presented by Miss Eliza Schrœder.

In conclusion, the society's thanks are due to the committee of arrangements, particularly to Dr. Thos. Edmondson the chairman, and Messrs. Saml. and John Feast, for the excellent and tasteful arrangement of the exhibition, and for the prompt and efficient manner in which they performed the arduous duties imposed on them.

[From Goodsell's Genesee Farmer.]

BLIGHT OF PEAR TREES.—In one of your numbers which is not before me, you notice the general opinions, of the cause of the decay of Pear trees by what is commonly termed fire blight.

I have seen many opinions on the subject, but none that I believe to be the true cause, which I attributed to the bursting of the sap vessels. I will give the proofs in support of my opinions.

About twenty-five years since I bought a lot in Hartford, Connecticut, on which there was two large pear trees. They had been neglected, and wanted pruning, but appeared in good health, although they grew but moderately, in consequence of the earth being very hard and sterile about them. I loosened the earth about them, and manured them very late in September, and in March next pruned them faithfully, and the growth through the spring, was very strong and rapid. During the most vigorous part of their growth, I found them attacked by what is termed *fire blight*.—Limbs that were in full vigor one day were blighted the next. My first apprehension was, that they were stung, or bored by some poisonous insect, but on examination, and dissection, I found in all cases, by the help of a strong magnifying glass, that the sap vessels, were turned of a dark chesnut color longitudinally, since which time, I have seen many circumstances that have confirmed my opinion.

A gentleman in Hartford purchased a farm in the vicinity, on which was a large pear orchard, which had long been in bearing; the ground was covered with green sward which had been pastured for many years. The trees were in good health.—He ploughed a part of it, and put it in a high state of cultivation. The trees grew very rapid, were attacked, as the others above mentioned, and some of them entirely destroyed, while those which were in that part which remained in grass were entirely free.

In the garden where I am now, there are twelve large pear trees of different sorts, which when I came here five years since, were in good health. The garden was in a neglected state, the soil was worn out.—I put it in a high state of cultivation, the trees grew rapidly and were all attacked with the blights, and I was obliged to take the rich earth away from them and replace it with poor soil, which saved them all with the loss of a few limbs, and they are now doing well.

From the above it will be seen that the cause is a sudden change from a stinted to a rapid growth, and the sap vessels not being as elastic as in other trees, burst and destroy the tree, but may be easily prevented by care being taken, not to increase the growth too rapidly.

Other trees are affected in a degree in the same manner. The quince is liable next to the pear.

NATHAN RUGGLES.

New Haven, (Ct.) Feb. 27, 1834.

ON CATERPILLARS, *by George Webster, of Albany, N. Y.*

From my experience, I am fully satisfied our fruit trees may be preserved from that dreadful insect, the caterpillar, in a vary sure and easy way. In the year 1804, the large elm at our corner was nearly stript of its leaves by a small caterpillar. Various modes to destroy them were made use of, such as covering the trees with tar, fish oil, and drowning their nests, but without any good effect. Some day in the month of July, I was standing at our door, when a gentleman from Niskayuna was passing by. He accosted me in words like these: "George, 'tis a pity to lose so fine a tree." In answer—"We made use of various articles to destroy them, but without success."—"Send," says he "and get a little sulphur and bore into the tree about six inches, and fill it with sulphur and my word for it, not a caterpillar shall be seen after forty-eight hours."—"Will you stay and see it done." "I will," says he. The hole was bored, the sulphur put in, and a piece of wood the size of a cork drove in strongly, to prevent the sap or sulphur oozing out. In a less time than he mentioned, there was not the vestige of a caterpillar on the tree. Soon after, a large caterpillar appeared on our poplars, in front of my house: every tree was served in the same way as the elm had been, and the result the same—while my neighbors cut down those fine trees, because they were very much alarmed that the insect was that very venomous reptile called "the asp."—A few days afterwards I discovered that a very beautiful plumb-tree in my yard was attacked by the caterpillar; the same course was pursued, and the result the same. I have followed this practice every year since 1805, when I discovered these insects on my trees, and never has there been a caterpillar on my trees after forty-eight hours. It has been tried in New-York and Pennsylvania, where I have been present, and in the western parts of this state. In no case has it to my knowledge or belief, failed. Two men are sufficient to go through an orchard or forest of 200 trees in a day.

P. S. I have a strong presentiment in my mind, that if applied to our peach, plum or cherry trees, it would prevent the black rust.

[We tried this experiment on cherry trees in Cesar-Creek township in this county, in the month of June last; and found that in less than forty-eight hours there was not a worm on the trees; nor did they return. ED. INDIANA WHIG.]

THE BREEDER & MANAGER.

[From Dickson's Live Stock and Cattle Management.]

Appellatives, or usual names.—The common names of the Neat Cattle, are, Bull, Ox, and Cow. The bull is chiefly kept for the purpose of propagation; and until one year old, while he sucks, has the name of *bull-calf*, after which, *stirk*, or *yearling bull*, and then *bull* of two or more years till six, when he is *aged*. The ox is the castrated male. A young castrated male, before the first year, is called an *ox*, or *stot-calf*, then a *yearling-stot*, or *stirk*—(stot and stirk are provincial terms)—at two years old a *steer*, or *twinter;* from two to five or six years a *bullock*, and after that an *ox:* but in some districts *bullock* is absurdly the general term for any full-grown cattle, male or female. A female, while sucking, is called a *why*, or *cow-calf;* after the first year, a *heifer*, *quy*, or *why;* at four years old, a *cow*, which she ever afterwards retains: and a castrated female is denominated a *spayed* or cut heifer or cow. Certain of the Welch and Scotch cattle, of rather a coarse and hardy kind, bear the appellation of *runts*.

Some sorts of neat cattle reach their perfection or full growth much sooner than others, as at five or six years old and earlier, others not until the age of eight or nine; but early maturity is in general a great advantage, and a mark of goodness in the breed or kind.

Teething.—The teeth, with the horn, shew the age of neat cattle. They are destitute of front teeth in the upper jaw; but the mark of age, as in some other animals, is to be found in the corner incisory teeth of the lower jaw. The first front teeth, or calves' teeth, remarkable for their whiteness, are shed at two years old, and replaced by others not so white. Every succeeding year two other calves' teeth, next to the front, are also replaced, and at five years old, the incisory or cutting teeth, being all renewed, are of good length, whitish, and even. From this period, as in the horse, the teeth are gradually filling up, until six years old, when the beast is properly full mouthed. The teeth afterwards become discoloured by age, and are sometimes long and irregular.

The age of neat cattle may likewise be determined when three years old by the horns, which are shed, and replaced by others that continue. In the fourth year a horny ring, or cylinder, appears near the head, as the bud or basis of the horn. In the course of the year this ring moves, being pushed forward by another which succeeds it; a pro-

cess which goes on to the end of the animal's life, its years being determinable by the number of the rings upon the horns, reckoning three years for the first. For the purpose of concealing the animal's age, dealers and jobbers very often obliterate these rings by shaving and dressing the horns.

Chewing the Cud, in Neat Cattle.—This is the operation of re-chewing the swallowed food, by which means it is more effectually broken down and mixed with the saliva. Ruminant animals have no fore teeth in the upper jaw; but the gums are hard, and the tongue is rough. This roughness is occasioned by numbers of long sharp-pointed protuberances called *papillæ*, with which the whole substance of it is covered. These protuberances anatomists have observed to be turned towards the throat; so that by their means the food, having once got into the mouth, is not easily pulled back or returned. The animals, therefore, supply the defect of teeth by wrapping their tongues round the tufts of grass, and so by pressing such matters against the upper jaw, keep them stretched, and cut them with the teeth of the under jaw; then without much chewing throw them down into the œsophagus, or gullet; the tube and cavity which conveys the undigested aliment to the first stomach.

It has been remarked, that the retrograde motion of the œsophagus in ruminating cattle, such as cows, sheep, goats, and others, renders them capable of bringing up the softened grass from their first stomachs. But that when these animals fill themselves too full of clover and of other grass, or of some rich young vegetable substances, which are liable to run into fermentation, this stomach becomes distended with air, and death frequently ensues. This leads to the affection or disorder called hoven, which will be mentioned in its proper place.

It is well ascertained, that all animals which ruminate must have more stomachs than one; some have two, some three, and the ox tribe no less than four. The food is carried directly down to the first, which lies upon the left side, and is the largest of them all, vulgarly called the paunch, or great bag. There are upon its internal surface a vast number of small blunt-pointed processes, by which the whole has a general roughness, and the surface is extended to several times the size of the paunch itself. The food, by the force of the muscular coat of this organ, and the liquors poured into it, is sufficiently macerated; after which it is forced up from thence by the inverted action of the œsophagus, or gullet, into the mouth, to be further chewed, and thence it is again returned, made very small by further mastification, being completely united with the saliva; and this is what is properly called rumination, or chewing the cud. For this purpose those teeth called *dentes molares*, or the grinding-teeth, instead of being covered with a thin crust, have an enamel on them consisting of perpendicular plates, between which the bone is bare, and constantly wearing faster than the enamel; so that the teeth remain good to an extreme old age; and the rumination is carried on for a long time, without any danger of spoiling them. After rumination the food descends by the gullet into the second stomach. The œsophagus opens indifferently into both, and ends exactly where the two stomachs meet; and there is a smooth gutter with rising edges, which leads into the second stomach, from thence to the third, and also to the fourth: into any of which the animal can direct the food at will. The second stomach, which is the anterior, or smaller, is called the honey-comb, from its consisting of a great number of cells on its internal surface, of a regular pentagonal figure, like a honey-comb. Here the food is farther macerated, and thence carried forward into the third, which is generally known by the name of the many-plies, or many-folds, because the internal surface rises up into a great many plies or folds, according to the length of this stomach. Some of these folds are longer than others; first two long ones on each side, and within these, two shorter in the middle, and so on. There are numberless glandular grains, resembling millet seeds, dispersed all over the folds, from which some call this stomach the millet. From thence it passes into the fourth stomach, commonly called the maw, being the place where the chyle is formed, and from which the food descends immediately into the intestines. The bowels of these animals are of considerable length, in proportion to the bulk of their bodies. Digestion is accompanied with a peculiar kind of ruminant action, the intention of which seems to be, that the food may be sufficiently broken or ground into small particles, and thus rendered fully capable of being acted upon by the stomach; for it is observed that a calf does not ruminate while it is fed only upon milk, though the action takes place as soon as it begins to eat solid food. But it is to be observed, that as long as a calf feeds only upon milk, the food descends immediately into the fourth stomach. The rumination does not take place till after the animal has eaten a considerable quantity; when it lies down, and begins to chew, though the operation will take place in a standing posture, if it cannot lie down.

In this action a sort of ball or lump is observed to rise from the stomach with great velocity, almost as if shot from a musket. This ball, or lumpy portion of the food, the animal chews very accurately, and then swallows it again, and so on alternately, until all the food it has eaten has undergone the same operation. This is easily explained by the structure of the œsophagus, which has one set of fibres calculated for bringing up the grass, or food, and another for repelling it down again.

It is evident, therefore, that by means of rumination, the cow, and all ruminating cattle, extract a much larger portion of nourishment from their food than those animals which do not ruminate; and hence they are contented with much worse fare, and smaller quantities of it than the horse; hence, too, their dung being much more exhausted of its fine and rich parts than that of the horse, proves much inferior to it as manure for land.

By the number of stomachs, and the power of rumination thus given to animals of these kinds, which feed principally on long, tough, dry, hard matters, many different advantages are gained:—in consequence of the more full maceration, and intimate mixture of the salival fluid and such materials, much more nourishment is derived from a given quantity of food, and the animal suffers much less inconvenience from the delay of the substances in the bowels.

SECTION II.—*Principles and Practices in Breeding Neat Cattle, and other sorts of Live Stock.*

With a view to the improvement of the several breeds and kinds of live stock, different principles, practices, and systems of management, have been proposed; but those which appear to be the most suitable, correct, and proper for the purpose, to have the greatest foundation in practical experience, and to be the result of the latest and most full enquiry on the subject, are those given by Sir John Sebright, in his valuable letter on "the Art of improving the Breeds of Domestic Animals." This work, together with the remarks of several judicious farmers and breeders, who have investigated and explained the principles and practice recommended therein, establish beyond all doubt the following facts and axioms:—

1. That the males and females, intended to breed together, should be provided with particular attention to the good or bad qualities of each, or "in reference to each other's merits and defects."

This is considered essentially necessary, as it is not always found, "by putting the best male to the best female, that the best produce will be obtained;" as should they each of them have a disposition or inclination to the same fault or imperfection, in however slight a degree, it will commonly preponderate and prevail to a much greater in the offspring, and thus decrease their value. The same faults or defects in the different sexes are unquestionably to be equally as much avoided and prevented, as the excellencies and perfections of them are to be united and combined.

2. That a breed or variety of any sort of animals may be considered "to be improved, when any desired quality has been increased by art, beyond what that quality was in the same breed, in a state of nature."

The increasing the natural good qualities and properties of different breeds and sorts of animals, should be the first consideration of the breeder, such as "the swiftness of the race horse, the propensity to fatten in cattle, and the fine wool in sheep, improvements which have been made in particular varieties of the several different species to which these animals belong." By such means, improved values are given to different sorts of animals as live stock.

3. That after a breed or variety has been rendered, in the above manner, as perfect as it is capable of being made, "what has been produced by art, must be continued by the same means; for the most improved breeds will soon return to a state of nature, or perhaps defects will arise which did not exist when the breed was in its natural state, unless the greatest attention is paid to the selection of the individuals which are to breed together."

The same care, nicety, and exactness must be bestowed, in keeping up, as in forming the improvement itself; the smallest inclination or tendency to deviation or imperfection in the stock is to be attended to the instant it begins to make its appearance, in order that it may be counteracted "before it becomes a defect," and be corrected

before it has attained too high a degree, but at the same time without carrying correction too far on the contrary side.

4. That full and proper regard is not only to be constantly had to the "qualities apparent in animals selected for breeding, but to those which have prevailed in the race from which they are descended, as they will always shew themselves, sooner or later, in the progeny, it is for this reason that we should not breed from an animal, however excellent, unless we can ascertain it to be what is called *well bred;* that is, descended from a race of ancestors which have, through several generations, possessed, in a high degree, the properties which it is our object to obtain."

It is of the most essential importance, that the animals selected for breeding be not only *good* in themselves, and capable of being traced to parents which are the most pure and perfect of their kind, but that every intervening link in the chain of their ancestry should likewise have been good.

5. That "if a breed cannot be improved, or even continued in the degree of perfection at which it has already arrived, but by breeding from individuals so selected as to correct each other's defects, and by a judicious combination of their different properties, a position that will scarcely be denied, it follows that animals must degenerate by being long bred from the same family, without the intermixture of any other blood, or from being what is technically called *bred in and in.*"

Therefore, connecting animals for breeding that have too near or close a relation in blood to each other for a length of time should be avoided, though animals of different families of the same sort may often be united with propriety and advantage.

6. That "if the original male and female were of different families, by breeding from the mother and the son, and again from the father and the daughter in the same way, two families sufficiently distinct, might, it is supposed, be obtained; for the son is only half of the father's blood, and the produce from the mother and the son will be six parts of the mother and two of the father."

In this manner of combining them, they would not be sufficiently near in their kindred or blood as to deteriorate their offspring or stock.

7. That though "the occasional intermixture of different families" is believed "to be necessary," it is not "by any means approved of, to mix two distinct breeds, with the view of uniting 'wholly' the valuable properties of both. This experiment has been frequently tried, but has, it is believed, never succeeded. The first cross frequently produces a tolerable animal, but it is a breed that cannot be continued.

Thus, were it possible, "by a cross between the new Leicestershire and Merino breeds of sheep, to produce an animal uniting the excellencies of both, that is, the carcase of the one with the fleece of the other, even such an animal so produced would be of little value to the breeder; a race of the same description could not be perpetuated; and no dependence could be placed upon the produce of such animals; they would be mongrels, some like 'the former,' and some like 'the latter,' and most of them with the faults of both."

In the intermixing of different families of animals as crosses, much care and nice attention must be bestowed not to unite such as cannot have the valuable qualities or properties which they may possess, or an improvement of them perpetuated, and afterwards certainly produced in their offspring.

8. That a particular formation *generally* indicates a disposition to get fat in all sorts of animals; but this rule is not *universal*, for we sometimes see animals of the most approved forms, who are *slow feeders*, and whose flesh is of a bad quality, which the graziers easily ascertain by the *touch.* The disposition to get fat is more generally found in some breeds than in others. The Scotch highland cattle are remarkable for being almost all *quick feeders*, although many of them are defective in shape. The Welsh cattle have but little disposition to get fat; not from being particularly ill-shaped, but because they are almost invariably what the graziers call *bad handlers.*"

Consequently, such animals as are well-shaped or approach nearest to the approved form, and which have the most proper *feel* in the flesh, should be employed in the raising and improving of such stock.

It cannot therefore be too strongly impressed upon the attention of the breeder and improver of different sorts of live stock, to be most particular in a just and suitably exact selection; in putting animals together that are not too closely related in their kindred, and in crossing the families and breeds of different kinds in the most fit and correct manner.

MISCELLANEOUS.

Population of Great Britain.

There have just been printed in two volumes folio, an "Enumeration Abstract" of the population of Great Britain for 1831, made from the returns and answers forwarded from each parish in England and Scotland, pursuant to an act of Parliament.

Population of England and Wales, from the year 1700 to the year 1830, including the army and navy, and merchant seamen.

1700—5,134,516	1750—6,039,648	1800—9,187,176
1710—5,066,337	1770—7,227,586	1810-10,407,556
1720—5,345,351	1780—7,814,827	1820-11,957,565
1730—5,687,993	1790—8,540,738	1830-13,840,751
1740—5,829,705		

The population of Ireland amounted to 7,767,401.

The increase of Great Britain since 1801, has always been about one and a half per cent. per annum.

The comparative proportion of families stands as follows in the centesimal parts.

	Agriculture.	Trade, &c.	Others.	Total.
Great Britain.	1811—35	44	21	100
	1821—33	46	21	100
	1831—28	42	30	100

Thus trade and manufactures appear to have somewhat increased between 1811 and 1821, agriculture to have somewhat declined, but between 1821 and 1831, the proportion of families employed in trade receded from 46 to 42 per cent. and the agricultural population from 33 to 28 per cent.

Summary of Great Britain.

	1801	1811	1821	1831
England	8,331,434	9,551,888	11,261,437	13,191,005
Wales	541,546	611,788	717,438	806,182
Scotland	1,599,061	1,805,688	2,093,456	2,365,114
Army, Navy,	470,598	640,530	319,300	277,017
	10,942,646	12,609,864	14,391,631	16,539,318

British Manufactures—The value of the woollen manufactures exported in 1831, amounted to £4,849,427; 1832, £5,479,866; and in 1833, to £6,511,780.

The cotton manufactures exported in 1831, amounted to £18,073,625; in 1832, £17,398,378; and in 1833, £19,659,672.

The linen manufactures exported in 1832, £1,783,432; and in 1833, £2,199,441.

The silk manufactures exported in 1831, £455,938; in 1832, £529,990; and in 1833, £740,294.

The average consumption of wool in 1829, '30, '31, '32, was less than 28,000,000 pounds. In 1834, it had risen to 39,618,503 pounds.

The exports from Great Britain of earthenware, glass, hardware and cutlery, iron, steel, copper, brass, lead, tin in bars, &c., tin-plates, salt, sugar refined, coals, and culm, in 1832, amounted to £31,751,792; and in 1833, to £31,521,558.

A great number of emigrants are constantly leaving Ireland for America. At Cork, six ships were receiving passengers, and the quay was covered with men, women and children, all preparing to embark, and many lamenting of having arrived too late to obtain an immediate passage. The Pallas had dropped down to Cove, with 220 on board.

The brig Penelope had sailed from Yougal with 240, and the Recovery was to leave the same port in a few days with 200 more, for Quebec.

Six large vessels were receiving passengers at Limerick for North America.

The Jane, of Halifax, left London on the first February, with passengers for New York. She had encountered severe gales, and on the 18th, was fallen in with by the Mariane Pauline, a Hamburg brig, which vessel took on board all the passengers and carried them to England.

The Angora Cat has one eye blue and the other yellow.

The *pip*, a disease of poultry, is a thin film, which grows under the tip of the tongue.

Eggs are hatched at 104 degrees of heat.

The liquor of the oyster contains innumerable embryos, with transparent shells—120 to the inch; and also other animalcules, as three kinds of worms, &c. They turn over with the tide.

The horns of the Abyssinian ox are about four feet long, and seven inches in diameter at their base.

The Abyssinian buffalo is double the size of our oxen.

CONTENTS OF THIS NUMBER.

Rare Chance for Farmers and Victuallers; Millet; Mustard; Striking Contrast; New Invention; Preserving Bacon; A firm of Brick Makers in Mount Vernon, Ohio; Itch caused by an Insect; Mustard, Cultivation of; Fence Posts; Butter; Plants derive most of their Carbon from the air; Gumption; Flowering Bean; Horticultural Society, Anniversary Meeting and Report; Blight in Pear Trees; On Caterpillars; Live Stock; Dickson's Principles in Breeding Cattle; Population in Great Britain; British Manufactories, number of Emigrants; Angora Cat; Pip in Poultry; Embryos of Oysters; Horns of Abyssinian Ox.

BALTIMORE PRODUCE MARKET.

☞ *These Prices are carefully corrected every* WEDNESDAY.

	PER.	PROM	TO
BRANDY, Apple,	gallon.	$0 27	$—
Peach,	"	75	—
BEANS, white field,	bushel.	2 00	—
BEEF, on the hoof,	100lbs.	6 25	7 00
CORN, yellow,	bushel.	61	—
White,	"	61	—
COTTON, Virginia,	pound.	10	12
North Carolina,	"	11	12½
Upland,	"	11	14
FEATHERS,	pound.	36	37
FLAXSEED,	bushel.	1 00	1 25
FLOUR—Best white wheat family,	barrel.	6 50	7 00
Do. do. baker's	"	5 75	6 25
Do. do. Superfine,	"	5 00	5 25
Super Howard street,	"	4 87	5 00
" " wagon price,	"	4 75	— —
City Mills, extra,	"	5 12	5 25
Do.	"	4 75	4 87
Susquehanna,	"	5 12	—
Rye,	"	—	—
GRASS SEEDS, red Clover,	bushel.	4 00	4 50
Timothy (herds of the north)	"	—	—
Orchard,	"	3 00	—
Tall meadow Oat,	"	2 50	—
Herds, or red top,	"	1 25	—
HAY, in bulk,	ton.	15 00	16 00
Pressed,	100 lbs	—	95
HEMP, country, dew rotted,	pound.	6	7
" water rotted,	"	7	8
LIME,	bushel.	30	35
MUSTARD SEED, Foreign,	"	4 50	5 00
Domestic,	"	5 00	—
OATS,	"	37	—
OIL, linseed,	gallon.	85	87
PEAS, red eye,	bushel.	—	—
Black eye,	"	— —	1 50
Lady,	"	—	—
PLASTER PARIS, in the stone,	ton.	3 25	—
Ground,	barrel.	1 37	—
PALMA CHRISTA BEAN,	bushel.	2 00	—
RAGS,	pound.	3	4
RYE,	bushel.	68	69
TOBACCO, crop, common,	100 lbs	3 50	5 00
" brown and red,	"	4 50	6 00
" fine red,	"	6 00	8 00
" wrappery, suitable for segars,	"	6 00	12 00
" yellow and red,	"	8 00	12 00
" yellow,	"	13 00	17 00
" fine yellow,	"	15 00	22 00
Seconds, as in quality,	"	4 00	5 00
" ground leaf,	"	5 00	9 00
Virginia,	"	4 00	—
Rappahannock,	"	3 00	4 00
Kentucky,	"	4 00	8 00
WHEAT, white,	bushel.	1 10	1 18
Red,	"	95	1 07
WHISKEY, 1st pf. in bbls.	gallon.	23½	24½
" in hhds.	"	21	21½
" wagon price,	"	20	—
WAGON FREIGHTS, to Pittsburgh,	100 lbs	1 50	—
To Wheeling,	"	1 62	—
		washed.	*unwash*
WOOL, Prime & Saxon Fleeces,	pound.	50 *to* 60	24 *to* 26
Full Merino,	"	40 50	20 24
Three fourths Merino,	"	33 40	18 20
One half do	"	27 33	16 18
Common & one fourth Meri.	"	22 27	16 18
Pulled,	"	25 30	16 18

Peas and Beans are scarce and much wanted.

BALTIMORE PROVISION MARKET.

	PER.	FROM.	TO.
APPLES,	barrel.	$2 00	$2 50
BACON, hams,	pound.	10	—
Shoulders,	"	—	8
Middlings,	"	—	8
BUTTER, printed, in lbs. & half lbs.	"	22	25
Roll,	"	12	18
CIDER,	barrel.	—	—
CALVES, three to six weeks old	each.	3 00	6 00
COWS, new milch,	"	15 00	27 00
Dry,	"	9 00	12 00
CORN MEAL, for family use,	100lbs.	1 30	1 37
CHOP RYE,	"	1 50	1 62
EGGS,	dozen.	11	—
FISH, Shad,		—	—
" salted,	barrel.	6 37	—
Herrings, salted, No. 1 & 2,	"	3 12	—
Mackerel, No. 1, 2 & 3,	"	4 75	6 25
Cod, salted,	pound.	3	—
LAMBS, alive,	each.	1 25	2 00
Slaughtered,	quart'r	37½	75
LARD,	pound.	8	—
POULTRY, Fowls,	dozen.	2 25	2 50
Chickens,	"	1 50	—
Ducks,	"	87	1 50
POTATOES, Irish,	bushel.	75	—
Sweet,	"	—	—
VEAL, fore quarters,	pound.	6	—
Hind do.	"	8	—

ADVERTISEMENTS.

MILLET SEED.

A SUPPLY of this seed just received and for sale at $1,50 a bushel, at the *Amer. Farm. Establishment.*
june 6

GREY SULPHUR SPRINGS, OF VIRGINIA.

THE Subscriber having purchased this Spring, has erected Buildings for the accommodation of a small Company, the present season; and contemplates making such other improvements as may become necessary.

THIS SPRING is situated near the celebrated and fashionable *Sulphur Springs of Virginia*, being 9 miles from the *Red Sulphur*, 23 miles from the *Salt Sulphur*, and but *three quarters* of a mile from *Peterstown*. In consequence of the small quanity of water hitherto yielded by this Spring, it attracted but little notice, and was known but to the immediate neighbourhood. Having opened the rock through which it flows, a large supply has been obtained, sufficient for the use of several hundred visitors.

The water is beautifully clear and cool, and leaves a greyish deposit, with a slight tinge of red on the surface, similar to that of the Red Sulphur Spring. Some of the water taken from the Spring and analyzed, has been found to contain the following ingredients—some of them in considerable quantities, viz: Carbonate of Soda, Carbonate of Lime, Sulphate of Soda, Oxide of Lithion, Oxide of Selenium, and Sulphuretted Hydrogen Gas—which, at the Spring, is in such quantities as to rise in bubbles. It is highly probable that other ingredients, which are in smaller quantities, will be found, on an analysis being made at the Spring, as the quantity of water brought away, did not permit of as minute an examination, as is necessary to determine whether other ingredients are not also held in solution. Those physicians to whomthis analysis has been submitted, have given it as their opinion, that these waters will prove especially beneficial in *Dyspeptic cases*, as well as other diseases. It is also highly probable from some experiments which have been made, that these waters may be alternated with those of the *Red Sulphur Springs* with much effect. There is a Post-Office at Peterstown, to which all letters should be directed.

Persons from the lower part of the Southern States, wishing to visit these Springs, should take the route by Charlotte, Salisbury and Salem, North-Carolina, and from the latter place, cross over by "*Goods*" Gap, to Newbern, and from thence to Giles Court-House and Peterstown. This is the shortest and believed to be as good, if not better than any other. The route through Tennessee to Newbern, may also be taken, but is longer.

The accommodations and style of living, as far as practicable, will be made to conform, to that usually found in the private families of the Southern States.

JOHN D. LEGARE.

Charleston, So. Ca. May 1, 1834—*June* 6.

TURNIP SEED.

A FULL SUPPLY of the following kinds on hand at this Establishment, at $1 per pound, viz:
Early White Dutch, Early Garden Stone,
White Flat, Long Tankard or Hanover,
Large White Norfolk, Red Round or Red Top,
Yellow Aberdeen, Ruta Baga or Swedish; also,
A small quantity of Dale's new Yellow Hybrid, represented as a very superior variety, at $2 per pound.
June 6, 1834.

BAKEWELL SHEEP.

ONE fine BUCK, one year old, bred by J. Barney, Esq. for sale for 100 dollars.
Also, several EWES at 50 dollars each, from same flock —Apply to I. I. HITCHCOCK,
june 3 American Farmer Establishment.

THE 7-8 SHORT HORN DURHAM BULL "DUKE" IS FOR SALE.

DUKE is 2 years old, red and white, by Parson, dam Isabella; Parson is by Bishop, dam, Moss Rose, (imported in 1821, bred by Mr. Ashcroft,) got by Phenomenon—Isabella is by the celebrated imported bull Lothario, dam, Meg, by Billy Austin. Duke is of uncommon fine size and figure, pronounced by judges to have every point and appearance of a full bred. Price (to suit the times) $150.

Also—Several 3-4 blood HEIFERS, with their first calves, will be disposed of at $100 each. Application to be made (post paid) to I. I. HITCHCOCK,
May 30 American Farmer Establishment.

IMPROVED STOCK.

FOR SALE—A full blood Durham improved short horned BULL, two half blood yearling BULLS, also several half and three quarter blood HEIFERS of different ages. These cattle are immediately descended from the stock of the late R. Colling (of England) a celebrated breeder.

Apply to the Editor, or at the farm of the proprietor, near Taneytown, Frederick county, Maryland.
May 30 4t C. BIRNIE.

NOTICE.

I WILL sell my FARM on South River, at private sale. It contains upwards of a
THOUSAND ACRES,
and possesses more advantages than most farms. Any information which may be required will be afforded to those who will call upon me at my residence in this city, or on H. H. Harwood, Esq at the Farmers' Bank of Maryland.
RICHARD HARWOOD of Thos.
Annapolis, May 30, 1834.

A FINE JACK AND JENNY—FOR SALE.

I HAVE the selling of a fine Jack and Jenny, which measure as follows, viz:

The Jack is of the extraordinary height of fifty-seven and a quarter inches, and was eight years old last spring.

He was imported from Malta, by Mr. C. Thorndike, of Boston, and is unquestionably one of the largest and most valuable animals of the kind in the United States. Price $800.

The Jenny is eight or nine years old, (not more,) is fifty and three-quarter inches in height, and a fine animal. While the above is the *lowest price* for the Jack, I will sell the two together for $1000. Letters in regard to these animals (post paid) will be promptly answered. Either of the animals will be sold separate from the other, if desired. I. I. HITCHCOCK.
May 30. American Farmer Establishment.

CUBA TOBACCO SEED.

JUST received from Matanzas, a few ounces of the true Cuba Tobacco Seed, from *la Vuelta Abajo*, warranted in prime order—Price $1.00 per ounce.
I. I. HITCHCOCK,
May 30. American Farmer Establishment.

WANTED,

BUCKWHEAT FOR SEED, by
I. I. HITCHCOCK,
May 9. American Farmer Establishment.

DEVON CATTLE.

THE subscriber has the selling of a considerable number and variety of these valuable cattle at prices *unusually low*, viz: Bulls from 75 to $100; Cows and Heifers from 60 to $80, and Calves, one year old and less, from 40 to $60. More particular information may be had by application to I. I. HITCHCOCK,
May 9. American Farmer Establishment.

POINTERS.

FOR SALE, several Pointer Puppies, littered 22d Nov.; they are of the very best blood, and are all most beautifully formed, and marked, being white with liver spots.
Price $10 each. Apply to I. I. HITCHCOCK.

Printed by SANDS & NEILSON, S. E. corner of Market and Calvert-streets.

THE FARMER & GARDENER;

AND LIVE-STOCK BREEDER & MANAGER.

CONDUCTED BY I. IRVINE HITCHCOCK, AND ISSUED EVERY TUESDAY FROM THE AMERICAN FARMER ESTABLISHMENT, AT $5 PER ANNUM, IN ADVANCE.

No. 9. **BALTIMORE, JULY 1, 1834.** **Vol. I.**

☞This publication is the *successor* of the late

AMERICAN FARMER,

(which is discontinued,) and is published at the same office, at five dollars per year, payable in advance.

☞When this is done, 50 cents worth of any kind of seeds on hand will be delivered or sent to the order of the subscriber with his receipt.

American Farmer Establishment.

BALTIMORE: TUESDAY, JULY 1, 1834.

NORFOLK THIN RIND HOGS.—We insert in the Farmer of this week, two letters from Wm. K. Townsend, Esq. on the subject of the Norfolk Thin Rind breed of Hogs. They give a succinct history of the introduction of this breed into our country; and describe their particular qualities, and great value. These letters show how this breed of hogs is recommending itself through the country, where it has been seen; and where their superior qualities have been contrasted with those of other kinds.

The four shoats, (one boar and three sows,) sent on to us by Mr. Townsend, came safely to hand, are thriving, and promise to do well. We hope to have some next year to dispose of to the numerous applicants for them. In the mean time we intend to procure some further particulars of the method of feeding hogs by steamed food, which has been put in practice by one of our neighbors with such decided advantage as must recommend that mode of feeding to general use.

—

Prospect Hill, 3 miles from New Haven,
12th February, 1834.

DEAR SIR:—Your much esteemed favor of the 24th ult. came to hand some days since, and should have received an earlier answer. I have a breed of swine, (Norfolk Thin Rind breed,) which are in these parts considered rather before any other breed we have. They were imported something over four years since, by *Henry Degroot*, Esq. of New York. He was in England, and heard of this breed of hogs as being of much note in that country. He purchased three pigs, and on his return took them to his farm in New Jersey, where he had a superior stock of blood horses and short horned cattle. Immediately after his return, he concluded to go to England, and spend some years in the city of London, and offered me his stock. I purchased two cows, one bull, and two pigs, (one boar and a sow)—the other, a sow, he placed on his father's farm. I have since understood that it has changed the breed for the better, in all that neighborhood. Persons in this part of the country have given them a thorough trial with other breeds; and they, with the same feed, have done better than any other. I usually keep, say five or six breeding sows; and my pigs are usually all engaged before they come. I generally choose a few of the best, and sell them for breeding, at different prices, at different ages:—when well weaned from the sow, five or six dollars each; and as they advance in age, so I advance in price. I should be glad to execute your order for one or more if I had them. I did intend this fall to reserve a few for myself, but could not, people would have them. I could only reserve one boar pig for a breeder, which I cannot sell at any price. My five sows are in pig, and if you wish me to send you some of them (if they have more than are already engaged) I can supply your order. I have seen the remarks about them in the New England Farmer, and what is there said of them is correct. They are a very meaty, small-boned breed; remarkably contented, and gentle; do well in pasture, or in small pens; eat any thing, and show by a rapid growth what they eat; the skin is remarkably thin, the hair short; short legs, and small rat tail; they mix well with other breeds, of all the different sorts we have in this neighborhood.

The bull I am fattening; he is one of the finest animals I have ever seen; seven years old. One of the cows was imported with the pigs: she is perhaps equal to any other that has been brought to this country, (so say good judges.) I have a stock growing from this breed, that I take much pains in raising. I am so well confirmed in my own mind of the importance of breeding from good animals, that I am determined for *one* to breed from no others.

I remain very respectfully your friend,

WM. K. TOWNSEND.

—

Prospect Hill, 12th June, 1834.

DEAR SIR:—Your favor of the 2d inst. came duly to hand. I was informed this morning that the regular packet schooner Mary & Martha, Capt. Monson, would sail at noon. I sent immediately my man with the pigs—they are safe aboard; and I saw her off at 1 o'clock this P. M. —they are in a snug cage, and a bag of feed with them,—the Capt. is a very attentive man, and assured me that he would take good care of them on their passage to Philadelphia,—I hope they will come in good order, and meet your expectations. I have collected the pigs from different sows, that they may breed together: I do not like to breed too near in the way of *relation*. The smallest sow, (black and white) is about three weeks younger than the other; it came from one of my best sows, and is a promising pig, and will soon be as large as the other; its mother is known by the name of *premium sow*. The black and white is quite liked in this section of the country; some prefer white. I did not know which (if either) you would prefer, so I send you part of each. My old imported sow was white, the boar black and white, marked almost like them sent to you. This breed of hogs are not particular as to feed; my sows run in pasture, and get most of their living on grass, until nearly time to pig. While they nurse, I feed them on meal, beans, rye, boiled potatoes, and some corn.—I am told almost daily, by persons who have pigs from me, or of others that have got into the breed, that their pigs do much better on the same feed than any other they have had. A gentleman from the country, *New Town*, about twenty miles, called at my farm this afternoon for a boar pig, for a breeder; he purchased of me two years since a sow pig, and after he returned home he disposed of her; but the pigs have, he says, beat any thing in the neighborhood; and he has now purchased it back, and is so well convinced of their superiority over the old sort of hogs, that he will in future have no other. He said the sow had this spring ten pigs, and people would have all that he could spare at 12½ cents per lb. while others sold for a small price. You wish to know how much these hogs will weigh at a year old. We do not generally butcher them at a year; the spring pigs butchered in the fall, say 8 or 9 months old, will average I think 250 to 300 lbs. Mr. Jeremiah Barrett, of New Haven, butchered one last year that lacked one day of nine months old that beat all others, its weight was 360 lbs. or thereabouts. Some others have gone nearly up to that. Fall pigs, butchered at say 14 to 16 months old, often weigh from 400 to 460 lbs. There are pigs now, that I sold last fall, that will be butchered about next December, that their owners say will go over 450 lbs. each. There are pigs that came in March, which if they continue to thrive as now, will be fully equal to any that were fattened last year, or the year before. A farmer from a neighboring town met me yesterday, and remarked, "I have finally adopted your breed of hogs,—I would not believe any body had so good a breed as I had, but I am now satisfied that mine can be improved." I would here remark that since this breed has become noted, people are selling pigs of a very different sort for the real *Thin Rind*. Some farmers have purchased a black and white boar of very little blood, and perhaps none, and put it to their old sows, and then sold their pigs for the real improved breed. People are now beginning to see into their tricks, and will not be so easily imposed upon.

I remain very respectfully your friend,

WM. K. TOWNSEND.

THE FARMER.

Westminster, June 20, 1834.

To the Editor of the Farmer & Gardener:—

Dear Sir—I wish to cultivate a small piece of ground in Lucerne, and take the liberty of requesting your information in regard to the time of sowing, preparation of the ground, quantity of seed to *half an acre;* and such other information in regard to its culture and use as you may think necessary. I would also thank you to inform me whether you can furnish seed, and at what cost? Your attention will greatly oblige,

Your ob't serv't,

J. COCKEY.

—

We here insert the letter of Mr. Cockey, making enquiries respecting the cultivation of Lucerne. We hope some one who has had more experience in the use of this grass than we have, will be so obliging as to communicate his experience on the subject. It has been cultivated in the neighborhood of this city, and highly spoken of. It has likewise been highly extolled by Mr. Livingston of New York, and deserves to have further trial. It is a grass that starts early in the spring, and should be placed in a warm soil and sheltered situation. It is highly spoken of in England; has succeeded well in New York; and yet is a native of a more southern climate: this would argue that it possesses powers which would render it of extensive usefulness, if its habits and constitution were well understood. Without this knowledge of every plant put into the ground, the farmer is always liable to lose his labor.

The best time for sowing this seed is in the latter part of May or beginning of June, as soon as the ground becomes warm, and yet, giving time for it to get sufficient root, that the summer sun, and the drought of July and August, may not destroy it. It may likewise be sowed in September, after the autumnal rains have cooled the earth, but should be in time for the root to gain a sufficient depth to sustain it through the winter. The soil should be sandy, or a light loam; it should be ploughed deep, and should be rich; but after manuring, a crop of potatoes or other root crop, had better be taken off before sowing the lucerne seed. The seed should be sown, lightly harrowed or brushed in, and then the ground should be rolled with a heavy roller. The quantity of seed that is generally sowed, is from 15 lbs. to 20 lbs. per acre.

The great value of this grass, is its adaptation to soiling, and its springing so quickly after the scythe. In a good warm soil and rich land, it may be cut four times in a year. An acre of good grass, has kept four horses, from the 15th of April, to the first of October—when young and in a green state, it is relished by all kinds of stock; but it is not so valuable for hay, as it loses its nutritious quality when made into hay in its matured state. Seed 37½ cts. per lb.—see Price Current.

Lane's Horse Power and Threshing Machine.—We invite the attention of our readers to our advertisement, in this number, of Lane's patent Horse Power and Thresher. We hope we hardly need to assure our customers and patrons, that we should not offer them these implements, nor permit them to be sold at our establishment on any terms, if we were not thorouhgly convinced that they will not cause disappointment. We are exceedingly slow to be convinced of the alleged excellencies of new machines, generally, and especially of Threshing Machines; and when this was first offered to us last summer we refused to have any thing to do with it even to notice it, till it should be proved worthy of notice, not by a mere trial for an hour or a day, but by steady use by others than the vender throughout a season. This has now been done, and so far as we can learn by conversation with a considerable number of gentlemen, who either used it or saw it used the last season, *we are satisfied* that it will perform satisfactorily all that is promised in the advertisement. One farmer in particular assures us that he purchased one of them at the beginning of harvest, and used it steadily all summer on his own and his neighbors' farms, and that it worked to admiration all that time, without breaking or failing in any particular. The animal he used was "an old mare 22 years of age, which worked in it steadily, and gained in flesh all the time." With her alone, he threshed on an average 80 bushels per day, and on one occasion, *eleven bushels in thirty minutes.* Another farmer, who owns and uses a good English machine, says Lane's threshes much cleaner than his, and added, "if I had no machine, I would have one of Lane's in preference to any other I have seen." It is this kind of testimony from all persons who have seen this machine operate, and not our own judgment alone that gives us assurance that the apparatus now offered is for its size *cheap, efficient* and *durable*, and which has induced us to offer and recommend it to our customers, and the public.

The horse used to propel the machine, must wear shoes, with good steel toes, but no corks behind. We shall probably publish some written testimonials of the excellence of this apparatus by those farmers, who have used it, in our next number.

[From the Genesee Farmer.]

The profits of the Dairy compared with that of fattening animals.

"It has been stated on the authority of the Board of Agriculture, and upon incontrovertible data, which any farmer or cow feeder may ascertain for his own satisfaction, that the quantity of herbage that will add 112 lbs. to the weight of an ox, will, when bestowed on a dairy cow, of ordinary good breed, and in fair condition to yield milk, enable her to yield about 2700 imperial pints of milk. And, as it is well known that, even in Scotland, where milk often contains more cream than that of cows fed on richer pasture; yet, in general, 17 pints of milk will yield an imperial pound of butter; and the buttermilk will sell at 1*d.* the three pints; and, as 120 pints of that milk will yield from 16 lbs. to 17 lbs. averdupois, of full milk or Dunlop cheese, it is easy to ascertain whether the 112 lbs. of beef, or these quantities of butter and buttermilk, or of cheese, will realize the greatest sum. The 2700 pints of milk will yield nearly 385 lbs. or 27½ stones imperial of full milk cheese; and, if made into butter, they will give nearly 157½ lbs. besides the buttermilk, which would about amount to half the quantity of milk churned. The average price of beef, for seven yeers past, has not exceeded 6*s.* per English stone; and the 112 lbs. of course amounts to 2*l.* 8*s.*, while 27½ stones of cheese, at 5*s.* per stone, the average price paid by the merchant to the farmer, during the last seven years, amounts to 6*l.* 17*s.* 6*d.*; and the average price of 157 lbs. butter, at 8*d.* per lb. for the same period amounts to 5*l.* 5*s.*, and the buttermilk to 1*l.* 17*s.* 6*d.* more, or both to 7*l.* 2*s.* 6*d.*; so that the average price of the cheese exceeds that of the beef to the amount of 4*l.* 9*s.* 6*d.*; and the butter and buttermilk give 4*l.* 14*s.* 6*d.* more than the beef produced from the same quantity of food to the cattle."

The above extract is from the Quarterly Journal of Agriculture for March, and was promised some weeks ago. Let us apply its leading facts to our market. We will assume, that the price of beef in our large towns is upon an average $5 per cwt., of butter 16 cents per lb., and of full milk cheese 7 cents. The result would be this:

112 lbs. of beef, at 5 cents,	$5 60
380 lbs. of cheese, at 7 cents,	26 60
157 lbs. of butter, at 16 cents,	24 12

These facts, at all events, are worthy the consideration of cattle farmers. B.

The Locusts.—The Ebensburg (Cambria county, Pa.) Spy, says "The locusts have never made their appearance on the mountains. The oldest inhabitants of this county have never seen them here. We know in 1832 they were in great numbers west of the mountains, and none were here. We do not pretend to explain this singular circumstance. Whether their non-appearance here is owing to something peculiar in the timber, the soil or climate, is beyond our means of information. We merely state the fact, let others speculate upon the cause."

Insects breathe through holes on each side of every segment of the abdomen, called spiracula.

Beetles, bees, dragon-flies, gnats, spiders, &c. have been observed to have mites on their bodies.

[From the Farmer and Rural Economist.]

LIQUID MANURE.—Water in its purest state, when it has been distilled or filtered though sand, still retains somewhat of the food of plants. Its component parts, oxygen and hydrogen, under certain circumstances, are seized by vegetables while in their growing state, and converted into the products which form the constituents of all vegetables. But pure water forms a meagre diet for plants. It may support life in vegetables, and some plants will maintain a feeble growth with very little nourishment except what is afforded them by pure water and air. But when water is impregnated with certain salts and gases, particularly such as are evolved during the fermentation and decomposition of vegetable and animal substances, it becomes what is called LIQUID MANURE. Urine, or the stale of all animals is water holding in solution certain salts and other substances, which are the *essence of manure*, or the food of plants in a concentrated state.

Fresh urine is a very powerful and efficacious manure, when properly applied, but if not mixed with solid matter it should be diluted with water, as when pure it contains too large a quantity of animal matter to form a proper fluid nourishment for absorption by the roots of plants.—Urine is lessened in the value, but its useful qualities are not entirely lost, by putrescence. During putrefaction the greatest part of the soluble animal matter that urine contains is destroyed; it should therefore be used as fresh as possible, with the precaution of diluting it with water, or mixing it with earth. Putrid urine, however, is a valuable manure. It abounds in ammoniacal salts; and though less active than fresh urine, is very efficacious.

According to some writers, and practical farmers, the value of the urine of cattle, if properly preserved and applied to the purposes of vegetation, is greater than that of all the dung which the same animals would yield! A letter from Charles Alexander, near Peebles, in Scotland, addressed to Sir John Sinclair, in 1812, for publication, contains much valuable information on this subject. 'This intelligent farmer had long been impressed with the great importance of the urine of cattle as a manure, and he set about to discover by a long and well-conducted series of experiments, the best method of collecting and applying it. He began by digging a pit contiguous to the feeding-stall, but distinct altogether from that which was appropriated for the reception of the dung. The dimensions of this pit, according to his own account, were 36 feet square, and four feet deep, surrounded on all sides by a wall; and the solid contents were 192 yards. Having selected the nearest spot where he could find loamy earth, and this he always took from the surface of some field under cultivation, he proceeded to fill it; and found that, with three men and two horses, he could easily accomplish 28 cubic yards per day; and the whole expense of transporting the earth did not exceed 4*l.* 16*s.* sterling, [about 22 dollars.] When the work was complete, he levelled the surface of the heap in a line with the sewer, which conducted the urine from the interior of the building, on purpose that it might be distributed with regularity, and might saturate the whole from top to bottom. The quantity conveyed to it he estimates at about 800 gallons; but as this calculation was founded partly on conjecture, for he measured not the liquor, it will be better and more instructive to furnish and proceed on DATA that are certain and incontrovertible. The urine was supplied by fourteen cattle, weighing about 34 stone [476 lbs.] each, and kept there for five months on fodder and turnips. The contents of the pit produced 288 loads, allowing two cubic yards to be taken out in three carts; and he spread 40 of these on each acre, so that this urine in five months, and from fourteen cattle, produced a compost sufficient for the fertilization of seven acres of land. He states farther, that he had tried this experiment for ten years, and had indiscriminately used in the same field either the rotted cow-dung or the saturated earth; and in all stages of the crop, he has never been able to find any perceptible difference. But what is still more wonderful, he found his compost lasted in its effects as many years as his best putrescent manure; and he therefore boldly avers, that a load of each is of equivalent value.

'It appears, then, that in five months each cow discharges urine, which, when absorbed by loam, furnishes manure of the richest quality and most durable effects for half an acre of ground. The dung-pit, which contained all the excrementitious matter of the fourteen cattle, as well as the litter employed in bedding them, and which was kept separate for the purpose of the experiment, only furnished, during the same period, 240 loads, and these, at the same rate, could only manure six acres. The aggregate value of the urine, therefore, when compared with that of the dung, was in the ratio of 7 to 6; so that we are borne out by these premises in this extraordinary inference, that the putrescible liquor, which in this province [Nova Scotia,] and under the management of our farmers, is wasted and annihilated as far as regards any useful purposes, is intrinsically worth more than the dung, as an efficacious and permanent dressing; and if we take into consideration that this latter manure is not treated with any skill and judgment, it will not seem surprising, that the culture of white crops has never been carried here to any extent, since we have despised and neglected the only means of creating them.'

We apprehend that the farmers of the United States are not, generally speaking, any more solicitous to turn the urine of their cattle to account for manure, than those of Nova Scotia. There are some cultivators, however, who have taken measures to secure this substance, and to apply it to useful purposes. Mr. Robert Smith, of Baltimore, has his stables constructed in such a manner that all the liquid discharges of his cattle are conducted, together with the wash of the barn-yard, into a cistern, pumped into a hogshead, and applied in a liquid state to the soil which it is wished to manure. This mode of making use of this substance is likewise recommended in the *Code of Agriculture* as follows:—'The advantages of irrigating grass lands with cow urine almost exceed belief. Mr. Harly, of Glasgow, (who keeps a large dairy in that town,) by using cow urine, cuts some small fields of grass six times, and the average of each cutting is fifteen inches in length. There are disadvantages, however, attending this mode of applying this powerful manure. It must be applied soon after it is formed, or oftentimes the putrefactive process will commence, and deprive it of a part of its efficacy. And as urine is of a scorching quality, it is unsafe to apply it to growing crops in great heat or drought. Hence it is unadvisable to use it, except for grass, after the month of April or May, unless diluted. It is particularly useful in the spring, when the application of liquid manure gives a new impetus to the plant, and makes its growth more vigorous. This manure forces newly planted cabbages in a most remarkable manner.'

If it be true that more manure can be obtained from the stale of cattle than from their dung and litter, in the proportion of 7 to 6 (as would seem by Mr Alexander's experiments as above detailed,) and that by our common modes of husbandry this stale is nearly or quite squandered away, the discovery is of very great importance indeed to agriculture. It is nothing less than a method by which farmers may, with a small expense, somewhat more than double their usual quantity of stable manure. And if farmers should 'value manure as a miser does his strong box—should grasp after and hoard it as eagerly and anxiously as a covetous man accumulates treasure,' surely the wise cultivator will not grudge some labor and expense to acquire more than double the usual quantity of so valuable an article. It is very true there are many things to be taken into consideration in all these economical processes. A principal inquiry should ever be whether the saving will cost more than the benefit arising from it will be worth. Many improvements, which are highly valuable in old and populous countries, where labor is cheap and land dear, cannot be advantageously adopted in this country, where the object, in general, is rather to make the most of our labor than of our land. It is to be recollected, likewise, that in New England, during a considerable part of the time in which cattle are usually housed, the liquid manure is soon converted into ice, and, in that state, must be transferred to the dung-heap, or inconvenient accumulations will take place before a thaw would render it practicable to separate the liquid from the solid parts of the manure. Still, with all these disadvantages, we believe, in most cases, it is highly advisable to preserve the liquid portion of stable-manure separate from the solid part; especially where cattle are soiled, or horses stabled during all or the greater part of the year.

Bone Manure.—This most valuable article for Long Island farms, is now sufficiently known to be in very great request by the farmers. The mill of Mr. Ogden in this city, at Red-Hook, has been at times unable to supply the demand. The mill of Mr. Hornby in New York, has ten thousand bushels on hand, which can be obtained on application to Mr. Childs, at 63 Fulton street, Brooklyn. Mr. Childs, informs us that the accumulation of bones beyond the demand in New York is such, that 800 tons now on hand will be sent off in a few days, to manure the soil of Great Britain. The exportation of bones to England is no new thing, but we hope that an increasing knowledge of the value will create a brisk demand at home.—Long Island embraces 925,000 acres of land, of which 587,695 are yet unimproved.—*L. I. Star.*

THE BREEDER & MANAGER.

[From Dixon's Live Stock Manager.]

The properties which seem more particularly to deserve the attention of the store-master, breeder and farmer, in their different views and schemes of improving the breeds of live-stock, may be considered under the following different heads:

Shape.—The opinions and notions of breeders have differed very materially on this point; but it is evident there can be only one true and perfect form, which must be that which approaches the nearest to exactness in the shape and proportion of the different parts. This regular proportion of the several parts undoubtedly constitutes the true form, and is that which ought to be aimed at by the breeder and rearer of cattle stock. At the same time other qualities, in connexion with symmetry of form, must be attended to, especially in animals raised for the purpose of human food, such as a disposition for, and capacity of, taking on flesh in the best and most valuable parts. It must be constantly recollected, that where there is much excess or deficiency in the proportions of the parts, which constitute the form of animals, injuries, and inconveniences naturally result: either they are weak and feed slowly, which occasions them to require a greater length of time in fattening; or else they fall greatly short in weight and value, by not laying on meat sufficiently in the best parts. Thus, though it must always be greatly desirable to bring the shape of such animals to as high a degree of perfection as possible, without, perhaps, reaching that roundness, fineness, and fulness of the parts which constitute perfect beauty; yet their chief use, for the advantage of the breeder is, however, never to be neglected or overlooked. The proper and suitable form in such cases is probably that given below.

Mr. Cline, an able and experienced anatomist and physiologist, has observed, that "the external form of domestic animals has been much studied, and that their proportions are well ascertained. But as the external form is an indication only of internal structure; the principles of improving it must, therefore, be founded on a knowledge of the structure and use of the internal parts."

The Lungs.—These are doubtless of the first importance. It is on their size and soundness that the strength and health of an animal principally depend. The power of converting food into nourishment is in proportion to their size. An animal with large lungs is capable of converting a given quantity of food into more nourishment than one with smaller lungs; and therefore has a greater aptitude to fatten.

The Chest.—The external indication of the size of the lungs are the form and size of the chest; the former of which should approach to the figure of a cone, having its apex situated between the shoulders, and its base towards the loins. The capacity of the chest depends on its form more than on the extent of its circumference: for where the girth is equal in two animals, one may have much larger lungs than the other. A circle contains more than an ellipsis of equal circumference: and in proportion as the ellipsis deviates from the circle, it contains less. A deep chest, therefore, is not capacious, unless it be proportionally broad.

A narrow chest is injurious; as there is too great a confinement of the internal parts destined for the purpose of respiration and the formation of the nutritious material.

The Pelvis—Is the cavity formed by the juncture of the haunch bones with the bone of the rump. It is essential that this cavity should be large in the female, that she may be enabled to bring forth her young with less difficulty. When this cavity is small, the lives of the mother and her offspring are endangered. The size of the pelvis is chiefly indicated by the width of the hips and the breadth of the twist, which is the space between the thighs. The breadth of the loins is always in proportion to that of the chest and pelvis together.

The Muscles and Tendons.—These should be large, by which an animal is enabled to travel with greater facility.

The Bones.—It is well observed, that the strength of an animal does not depend on the size of the bones, but on that of the muscles. Many animals with large bones are weak, their muscles being small. Animals that were imperfectly nourished during growth have their bones disproportionately large. If such deficiency of nourishment originated from a constitutional defect, which is the most frequent cause, they remain weak during life. Large bones, therefore, generally indicate an imperfection in the organs of nutrition.

The Head.—This should be neatly and compactly formed; neither too large, nor of too great a length. It should rather, indeed, be small, by which the birth is facilitated: its smallness affords other advantages, and generally indicates that the animal is of a good breed.

The Neck.—This part of the animal should never be of too great a length, but somewhat thin, gradually narrowing from the breast towards the head. The length should be proportioned to the height of the animal, that it may collect its food with ease.

The Legs.—These should be proportioned to the general size; the fore legs should be straight and clean, the hind ones forming an angle at the hock, so as to stand well under the loins: the distance between the feet in the different extremities equal; the feet round and even, and the hoofs straight.

The Belly.—This should be firm and capacious, without swagging, and the quarters deep, full, and well fleshed downwards.

Horns.—These are considered as useless to domestic animals, and are often the cause of accidents. It is not difficult to breed cattle without them. The breeders of horned cattle and horned sheep sustain a loss more extensive then they may conceive; for it is not the horns alone, but also much more bone in the skulls of such animals to support their horns, for which the butcher pays nothing; and besides this, there is an additional quantity of ligament and muscle in the neck, which is of small value. The skull of a ram with its horns weighed five times more than another skull which was hornless. Both these skulls were taken from sheep of the same age, each being four years old. The great difference in weight depended chiefly on horns; for the lower jaws were nearly equal, one weighing seven ounces, and the other six ounces and three quarters; which proves that the natural size of the head was nearly the same in both, independent of the horns and the thickness of bone which supports them. In a horned animal the skull is extremely thick; in a hornless animal it is much thinner, especially in that part where the horns usually grow. To those who have not reflected on the subject, it may appear of little consequence whether sheep and cattle have horns or not; but on a very moderate calculation it will be found that the loss in farming stock, and also in the diminution of animal food, is very considerable from the production of horns and their appendages. A mode of breeding which would prevent the production of horns would afford a considerable profit in the increase of meat and wool, and other valuable parts. They, however, are not only very ornamental to the animals, but they constitute an article of considerable value in the trade and manufactures of the kingdom.

The long and pointed horns are certainly dangerous, and the following method of eradicating them may be practised without the least inconvenience. The operation must be performed on the calf at the age of two or three weeks, when the horns are just beginning to shoot, and may be found loose between the bone of the skull and the skin. These small knobs, or horns in embryo, are of a gristly nature, in substance much softer than horn, and more compact than the skin; they may be cut on each side, but not to the bone, there being space enough between the horny part of it. The horn must be taken out by a sharp knife or some other instrument, and the wounded part be immedately seared with an iron instrument, hot enough to stop the bleeding and keep out the external air. It is asserted, that there is no danger in those parts of bleeding too much, but the sooner they are seared after cutting the better. If the calf be kept within doors, there is no danger of its taking cold in the wounded parts, and very little danger if kept without doors, except the weather be unfavorable; and even then the danger may be prevented by applying a small plaster of pitch, or some other sticking substance over the wounded parts, which are often known to be healed in a very few days.

The horns of cattle are generally designations of distinction and variety, and are supposed to denote particular qualities. Thus English beasts are distinguished as long, half-horned, short, and middle-horned, wide and broad-horned, polled, or hornless. The grand distinctions, however, are the long and shot-horned, which are generally accompanied with peculiar properties of milk and hide. Horns are also useful for marking the ages of beasts, and for other purposes.

The Eye.—This, and not the horn, some suppose, is the criterion or point of a beast which may be most universally depended upon as a guide to the grazier. The eye, which should be bright and prominent, is a mirror in which the health and habit of the animal may be seen with a degree of certainty. A mildness and meekness in the look, without any sort of boldness, are considered certain marks of feeding in a proper manner.

The Colour.—Formerly particular colours gave rise to many ridiculous notions and prognostics, but they are, in fact, very immaterial, except that white and light colours may be preferred, on ac-

count of a supposed tenderness of the meat, of which more will be said when treating on the nature of flesh. The most predominant colours are those of black, white, red, brown, and dun; but they are likewise often mixed, as spotted, brindled, or flecked. The most hardy colours are said to be the blacks, reds, and browns.

The writer of the Sussex Agricultural Report remarks that it has been contended that white is the infallible criterion of degeneracy in all the animals of the creation; that such coloured oxen and cows are weak and tender; and that no animal is met with of this colour in native health, and vigour. In confirmation of this remark, a reverend gentleman, Mr. Ferryman, has observed, that the white colour is the test of decline, and that those colours in the animal world which contain the most vivid hue, and are of the most shining lustre, mark animals endued with the greatest portion of health and strength: that birds, when confined in a cage, shift their plumage to the sign of decline or degeneracy; that the common poultry with high-coloured plumage are every way superior to white and its kindred; and that among mankind a healthy habit is visible in the floridness of the constitution; while, on the contrary, sickliness is shown by the paleness of the looks, and grey-headed age by the whiteness of the locks: but here the reporter justly asks, what traces of weakness are evident among the frozen inhabitants of the arctic circles? What sign of any want of spirit, vigor, or health is noticeable in the forest-tracts bordering on the Poles, which are inhabited by bears black and white. Many sorts of the animals of the Siberian forests, it is said, regularly change their colour to a white on the approach of winter, and return to their original colour in the spring. But on what principles of degeneracy it is demanded? The European swan is a pure white, the New Holland black; but neither of them are a degenerate race, as the above writer justly remarks.

Dark colors, besides hardness, are supposed generally to denote quick feeders in all sorts of neat stock, though not always. The yellowish dun and whitish tinges foretel quick feeders, and the varying sort of hair is a sure indication of fattening in all neat cattle.

Requisite and most suitable Form.—On the shape or form of an animal, it has been well observed, that "inequality of parts betokens weakness and imperfection, whereas just and equal proportion is the truest indication of strength and of ability in the animal, to produce, and sustain the greatest possible load of flesh. Should there be a deficiency of length and depth, we shall not only experience a deficiency of general weight, but especially of lean, by far the most valuable part of the animal's flesh. Short and round animals, although quick feeders, and of hardy constitution, fail in weight, and are apt to produce entire masses of fat: and the whole form being, as it were, crowded into the shape of a tun, we in vain seek that depth and substance in some of the noblest parts, which are to be found only in a well-proportioned carcase. On the one hand, the carcase being too long, denotes delicacy, inaptitude to fatten, a demand of much food, and a great consumption of time. The loins being narrow and thin, and the feet standing too close, are both signs of weakness as well as very unsightly defects. When the fore legs approach too near, it may be presumed, from the consequent narrowness of the chest, there will not be sufficient room for the action of the lungs during the period of fattening, and that risk may be incurred of that common accident, their adhesion to the ribs. Sickle or crooked hams, or the standing out too far of the hinder legs, so that they appear to drag after the body, are very unfavorable indications, and very disgusting in appearance. Thus, whatever be the height or size of the beast, the three grand requisites of form are the proportional union of length, depth, and substance, which assures the inherent and desirable qualities of each. The peculiar points of each species of stock will ever be found in a perfection commensurate with the general good shape of the animal."

But the above detail and delineation have been confined to "the characteristics of strength and utility solely, leaving untouched the lines of beauty, which may be defined to consist chiefly in the oval form or in the neat rounding of the parts. Thus, in horses and neat cattle particularly, instead of that excessive squareness and flatness of the shoulder, the side, and the buttock, depth ought to be relieved by a gentle fulness and swell, which are tokens both of beauty and substance; nor should there be any sharp bony protuberance, either upon the shoulders or hips, to offend the eye, by detracting from the plump and even proportion of the form."

"The chief object of the breeder and feeder being to fatten the carcases of his cattle, it may be supposed that any strong and healthy animal, however awkwardly proportioned, will answer the purpose;" but it is well known, and has been confirmed by all experience, that "attention to form is rewarded by quantity of product."

The most important points for ensuring the true proportion of form and the greatest weight of meat, as marked out by the intelligent breeder before noticed, are, that "the head 'should' be rather long;" the "muzzle fine; the aspect calm and placid; the horns fine; the neck light, particularly where it joins the head; the breast wide, and projecting well before the legs; the shoulders moderately broad at the top, and the points well in; the chine, when the animal is in good condition, so full as to leave no hollow behind them; the fore flank, 'which is the lower part of the side just behind the fore legs,' well filled up; the girth behind the shoulders deep; the back straight, wide, and flat; the ribs broad, and the space between them and the hips small; the flank full and heavy; the belly well kept in, and not sinking low in the middle, the whole forming, not a round or barrel-like body, 'which leaves' a deficiency both in the upper and lower part of the ribs, or want of depth in the sides; the hips globular, wide across, and on the level with the back itself; the hind quarters, from the hips to the extremity of the rump, long and straight; the rump points fat, and coming well up to the tail; the twist wide, and the seam in the middle of it so well filled, that the whole may very nearly form a plane, perpendicular to the line of the back; the lower part of the thigh small; the tail broad and flat towards the top, but the lower part thin; the legs straight, clean, and fine-boned; and, when the animal is in high condition, the skin of a rich and silky appearance."

In breeding animals, the nearer these forms of the several parts are approached, and the more they are combined, the greater will be their degree of perfection in shape.

But goodness of shape, though it very commonly indicates the ready taking on of flesh and fattening in animals, is not always a sign of that being the case; therefore, not only a nice and exact discrimination of the whole, and the principal points or parts of animals, but a careful selection of such as are the best fleshed, as ascertained by the *feel*, becomes essential; as the contrary sort are equally improper to breed from, as those which want proper shape altogether, or in particular parts.

[From the same.]

HOGS OR SWINE.

Nature, Circumstances, Character, Advantages and Uses.—These are animals which appear to have a middle nature between such as are graminivorous, which feed on herbs and grass, and those which are carnivorous, and eat flesh; possessing, in some measure, the distinguishing circumstances that are peculiar to each class. They are very numerous in their kinds, having spread and extended themselves to most parts of the globe, though they are said not to have been originally found in America, but to have been transported thither by some of the first settlers in that country. In some places, where they have increased rapidly, they have become again in the wild state, but with shorter bodies, and more thick in the snout parts as well as in the skin.

These form the principal animals of the second or smaller division or class of Live Stock, and are of considerable profit and advantage in certain situations and descriptions of farm lands; such as those of the arable and dairy kinds, though a few may be kept with benefit on almost any sort of farms, as they live much upon the various kinds of refuse materials, that can only be used for such purposes. The hog, which is a name generally applied to animals of the swine kind, may likewise be kept with much utility in various kinds of manufactories, where large quantities of grain are made use of, as in those of the starch kinds, and in distilleries and breweries.

There is evidently much diversity in these animals, in different situations, and under different circumstances, which in this, as well as in all other sorts of live stock, should be particularly noticed by the breeder, keeper, and farmer, in order that he may have a good breed, which will constantly pay better than an inferior kind. Like most other descriptions of farm animals, they, in some measure, require to be adapted to the nature of the keep, and the circumstances of the management under which the farm is conducted. They should constantly possess, as much as possible, the chief marks and properties of good hogs, which are those of the form or shape, the nature of the ears, and quality of the hair. The pendulous, hanging-down, or lop ear, and the coarse harsh hair, indicate largeness of size and thickness of skin; while erect or prick ears show the size to be smaller, but the animals more quick in feeding. Smooth, soft-haired hogs are most suitable for warm climates and places.

These animals have been stigmatized by many who seem to know but little of their real nature or habits, with being extremely filthy, and of an impure nature; but the fact is the very contrary; as they are particularly fond of cleanliness in every thing, though they may, like animals of the cattle kind, sometimes indulge, in hot weather, in wallowing in miry, dirty, and stagnated waters, for the purpose of cooling their excessive heat. Their stomachs are well suited by nature to the reception of a great number of substances that are nourishing to them, which, in other circumstances must have been wasted or lost, as the various refuse matters of the dairy, the kitchen, the garden, and the field, as well as some others. The nature of the form of them is extremely well fitted to the manner and habits by which they provide their food, being lower in the make than many animals, with a greater strength and thickness in the neck, the snout, and the length of the head, so as to turn up ground readily in procuring different sorts of roots, and their smell is acute, by which they have the power of readily discovering their proper food. Their natural inactivity and heaviness render them capable of speedily taking on flesh and fat, which is so laid on as to form a thick and regular lair on the surface of the flesh towards the skin. These animals seem to have a foreboding or sort of fear of bad weather setting in, as before which they are restless; and in the time of high winds are often much disturbed, running about in a hurried manner, and screaming very disagreably, at the same time carrying straws in their mouths to their habitations, and preparing, as it were, against such storms and impending bad states of the weather.

The flesh of these animals, especially in the tamed state, is very fine and wholesome, being easy of digestion. It is, of course, of very general use in many different ways; and for salting it has many advantages, as it takes the salt better and more readily; it keeps longer than most other sorts of meat, and consequently, is of vast utility for shipping and various other uses.

Swine are capable of living to the age of twenty or thirty years; but this circumstance can rarely or ever be ascertained in this country as they are mostly killed while young. In the ordinary management of swine, sows, after they have had two or three litters of pigs, are generally killed; but no breeder should part with one whilst she continues to bring large litters, and rear them with safety, although custom often induces the farmer to kill such sows, and to substitute others of not perhaps half the value in their places.

The characteristic distinctions of the hog, as given by naturalists, are, that there are four front teeth in the upper jaw, which are converging. In the lower jaw, six, which are projecting or prominent. Two canine teeth or tusks in the upper jaw, which are rather short; in the lower jaw two long, exserted or standing out. The snout truncated, prominent, and moveable. The feet, for the most part, cloven. It is a sort of animal, in some points, of an ambiguous nature, being allied to the *pecora*, or cattle, by its cloven hoofs; and to the *ferœ*, or wild beasts, in some degree, ny its teeth, yet differing widely from both in maby respects. It is consequently, supposed by some, to form at once a link between the cloven-footed, the whole-footed, and the digitated quadrupeds.

It is asserted by some naturalists, that swine are not indigenous to these islands, but probably without sufficient authority; they are no longer found wild either in this country or in France.

THE GARDENER.

MARYLAND HORTICULTURAL SOCIETY.

On Saturday, June 28, the following articles were exhibited:

By Mr. Thomas Dorsey, three very fine flat Dutch Cabbages.

By Mr. Caleb Whittemore, two quarts red monthly Raspberries, very fine.

By Mr. Samuel Feast, red bush and red running Alpine Strawberries.

Mr. J. B. Bastian, three varieties of Gooseberries.

Several very fine Boquettes of Flowers were presented by Mr. S. Feast, Mr. Kurtz, Mr. Waters, Mr. Smith and Mr. Bastian.

[From the Gardener's Magazine.]

Remarks on the Cause of Curl in Potatoes.

By a Denbighshire Gardener.

Sir,—Since my last letter, inserted in your Magazine (Vol. III. p. 19.,) I have paid much attention to discover the cause of curl in potatoes. I am now convinced that it is occasioned by the depredations of a small worm. In the presence of several witnesses, and at different times, I took up rows of potatoes; some were curled, others not: on the healthy plants not a worm could be found, but upon every one of the diseased plants I invariably found them. They lodge at the bottom of the stem, which, for an inch or more, is changed from its natural, to a pale unhealthy, colour; the ascent of the sap is obstructed, and the leaves, not having a due supply, are deformed and diminutive. In examining the cut of the potatoe I discovered a small hole, which probably was the place where the egg had been laid, and where the worm was bred; and, I suppose, as soon as the set became soft, the insect found its way to the stalk, where its damage is so visible.

If, then, this be the cause of the disease (and I beg to repeat that I have no doubt of it myself,) I have now to offer an opinion as to how it happens that potatoes taken up before they are ripe escape the attack, while those which are fully ripe are liable. On this point my own mind is satisfied that it can only arise from the difference in the quality of the sap, contained in a ripe and in an unripe tuber; the former is preferred, while the latter is rejected, by the parent insect. It is now confirmed by experience, and has been a rule in practice, to prefer unripe sets to fully ripe ones as a preventative where the curl is dreaded; and this, I can aver, it has constantly proved in my own practice, and therefore I can confidently recommend its adoption to every cultivator of the potatoe.

Besides being a security against the curl, the use of unripe sets has, as I mentioned in a former letter, an advantage of incalculable value to all who either cultivate potatoes, or to whom they are a necessary of life. To the cottager, to the serving or commercial gardener, and to the agriculturist, the obtaining of a crop *a month or six weeks earlier* is a result of great importance, and, one would think, only requires to be known, to be universally followed.

At some future opportunity I shall beg to trouble you with some observations on the culture of the strawberry, which may not, I flatter myself, be unworthy of the attention of your readers.

I am, Sir, &c.

A Denbighshire Gardener.

April 10, 1828.

Note by Mr. Main.—It is now near forty years since it was discovered, that a waxy set of a partly ripe potatoe was less liable to curl than a mealy one. This fact pointed out the propriety of obtaining sets from black or moorland districts, where it is necessary to take up the crop before the tubers are thoroughly ripened. This change of seed, as they are called, being attended with success, suggested the idea, and induced the expedient, of taking up the potatoes intended for the next year's sets before they were ripe, and hardening them by exposure to sun and air, to fit them to be stored safely. Many conflicting opinions have been stated respecting the cause of the curl, as well as on the rationality of the means taken to prevent it. Mr. Knight deems the property of mealiness an over-maturity of the plant, and therefore seems to conclude, that a perfectly healthy plant can hardly be expected from a mealy set. Others, with much more reason, have supposed the curl to be an endemical attack, happening in any district a certain number of years after the introduction of the potatoe, from neglecting to change the kind, or some atmospherical influence not easily accounted for. The history of the plant shows that the curl is only a local and temporary disease; and many districts formerly subject to it, as the neighborhood of London, for instance, are now free from its ravages, without any care in preparing the sets, or other precaution, save only in an occasional change of seed-sets. If, however, "A Denbighshire Gardener" is correct as to the fact (and there is no reason to suppose the contrary,) it may be supposed the depredators are migratory (no uncommon thing,) and his account does not, therefore, militate against the popular history of the disease. It is hoped that he will continue his observations on this curious circumstance, and endeavour to detect the perfect insect, which he may do, by placing a small part of the stem containing the worm under a wine glass, and watching its transformation.

Easy way to preserve fresh Flowers.—How may flowers be kept fresh in the house? This is an interesting question at this season. How strange it is that the public have not learnt one simple fact familiar to Botanists! I will tell it to you, Mr. Editor, that you may tell it to the world.

Flowers soon wither after plucking, chiefly because their moisture evaporates; and this cannot be effectually supplied by immersing the stems in water. Sprinkle them with water, and cover them closely with a glass, shade or vessel, and they will keep perfectly fresh for several days. They may stand in a dry place. Let this be

tried by your readers—they will be gratified at the result.

The cover should not be much larger than the flowers, or the moisture will be exhaled. A covered vase may be thus beautified with fresh natural flowers. The cover however, is apt to be covered with moisture within; therefore, when company is expected, it may be temporarily removed, and replaced afterwards. The flowers should then be sprinkled anew.

If greens, and even vegetables were wet and covered quite closely, they might be brought to market in much better condition, and from a greater distance, especially if sheltered from heat. Spinnage, asparagus, cucumbers, &c. if you put into light boxes and moistened, might probably come by canals, vessels, &c. in good order from a great distance.—*N. Y. Daily Adv.*

MISCELLANEOUS.

[From the Ohio Farmer.]

White Wash.—As the citizens of our village have, much to their credit, turned their attention to painting and white washing the out side of their buildings, we insert the following in hopes something may be drawn from it to their advantage on the score of utility and economy.

Incombustible Wash and Stucco White Wash.—The basis for both is lime, which must be first slacked with hot water in a small tub or piggin, and covered, to keep in the steam; it then should be passed in a fluid form, through a fine sieve, to obtain the flour of the lime. It must be put on with a painter's brush—two coats are best for outside work.

First. To make a fluid for the roof, and other parts of wooden houses to render them incombustible, and coating for brick, tile, stone work and rough cast, to render them inpervious to the water, and give them a durable and handsome appearance. The proportions in each recipe are five gallons. Slack your lime as before directed, say six quarts, into which put one quart of clean rock salt for each gallon of water, to be entirely dissolved by boiling, and skimed clean; then add to the five gallons one pound of alum, half a pound of copperas, three fourths of a pound of potash—the last to be gradually added; four quarts of fine sand or hard wood ashes must also be added; any coloring matter may be mixed in such quantity as to give it the requisite shade. It will look better than paint, and be as lasting as slate. It must be put on hot. Old shingles must be first cleaned with a stiff broom, when this may be applied. It will stop the small leaks, prevent moss from growing render them incombustible, and last many years.

Second. To make a brilliant Stucco White Wash for buildings, inside and out. Take clean lumps of well burnt stone lime; slack the same as before; add one fourth of a pound of whiting or burnt alum pulverized, one pound of loaf or other sugar, three pints of rice flour made into a very thin and well boiled paste, starch, or jelly, and one pound of clean glue, dissolved in the same manner as cabinet-makers do. This may be applied cold within doors, but warm outside. It will be more brilliant than plaster of paris, and retain its brilliancy for many years, say from fifty to one hundred. It is superior, nothing equal The east end of the President's house in Washington is washed with it.

[From Sir Samuel Moreland's Perpetual Almanac, Ready Reckoner, and Gardener, published in the reign of Queen Ann.]

DIRECTIONS RELATING TO THE PURCHASING OF LAND.

First see the land which thou intend'st to buy,
Within the Seller's Title clear to lie;
And that no Woman to it doth lay Claim
By Dowry, Jointure, or some other Name
That may it cumber. Know if bound or free
The Tenure stand, and that from each Feoffee
It be releas'd: That th' Seller be so old,
That he may lawful sell, thou lawful hold:
Have special care that it not mortgag'd be,
Nor be entailed on Posterity.
Then if it stand in Statue, bound or no,
Be well advis'd what Quit-rent out must go.
What Custom service hath been done of old,
By those who formerly the same did hold,
And if a wedded woman put to sale,
Deal not with her, unless she brings her Male;
Thy bargain being made, and all this done,
Have special care to make thy Charter run
To thee, thy Heirs, Executors, Assigns,
For that beyond thy life securely binds.
Those things forknown, and done, you may prevent
Those things Rash Buyers many times repent.
And yet when you have done all that you can,
If you'll be sure *deal with an honest man.*

Leisure Hours.—In what way can your leisure hours be filled up so as to turn to greater account, than in profitable reading? Young men, do you know how much is depending on the manner in which you spend your leisure hours? Ask the confirmed inebriate where he first turned aside from the path of sobriety, and if his memory be not gone with his reason, he will dwell with painful recollection upon the hours of leisure he once enjoyed. Ask the victim of crime, when he took the first step in his reckless career, and he will remind you of the leisure hours he enjoyed in his youth. On the other hand, do you see a man who was once in the humble walks of life, now moving in a sphere of external usefulness? He husbanded his leisure hours. Multitudes whose names look bright in the constellation of worthies, owe their elevation to the assiduity with which they improved the interval of leisure they enjoyed from the pursuit of the plough, the awl, or the anvil. They substituted the study of useful books for those trifling amusements which insidiously lead the unwary into the paths of profligacy and vice.

One pint of water converted into steam, fills a space of nearly 200 pints, and raises the piston of a steam engine, with a force of many thousand pounds. It may afterwards be condensed and appear as a pint of water.

Catching Moles in the Neck of a broken Bottle.—Take two common beer bottle necks, set them in the burrow with their wide ends outermost, facing the hole both ways; make them firm with a couple of sticks to each, crossing each other over the bottle necks, close to their widest ends; exclude light and air by a piece of turf or the like, and the trap is set. The mole, coming to the bottle-neck, finds the way plain, and squeezes herself in. She would get through, were she able to hold her hind feet on the glass to push her head and fore legs through; but here she fails, and is generally found squeezed in so hard that a stick is wanted to force her out. This mode of snaring was practised, if not invented, by a farmer in Banffshire in the early part of the seventeenth century; and it is likely that, though it might then have been generally known there, it has since been lost sight of in the adoption of less simple though more portable snares. By this means the poorest cottager might ensnare this unwelcome guest in his garden, whilst he might not be able to spare either his pence to buy, or his time to make, any other trap—*Adolescentulus.*

Overseer's Work.—"To have a place for every thing—to keep every thing in its place—and to do every thing in its proper time"—is the constant duty of an overseer. Where every thing is left hither and thither, every time a tool or implement is wanted, more time is lost perhaps in looking for it than the thing is worth. And unless every thing is done at its proper time, it is either done improperly, or may be, not done at all.

Keep all farming utensils, such as carts, wagons, ploughs, harrows, hoes, &c. &c., as much as possible from the weather. A day or two's time spent in erecting sheds for sheltering such articles from the sun and rain, will save in a year or two double the cost of them.

Adapt your crop as far as practicable to the nature of the field, the quality and condition of the soil, &c.—Crops that require to be kept the cleanest from grass, should be planted on the most level ground; while on hill sides where the land is disposed to wash, such crops should be planted or sown as have a tendency to retain the soil.

Adopt the plan of horizontal ploughing and ditching, to retain and conduct off the surplus water obliquely and gradually to the foot of the hill or into the nearest ravine.

Plant and set out live hedges. Try experiments with the different varieties recommended in this work, and send the result to the editor.

In sowing and planting, procure the best seeds you can hear of, and form a comparison in the product with the more common sorts.

Try different breeds of animals, and raise from the best.

Large Calf.—On the 18th inst. a cow belonging to Col. Shafer, of Hackerstown, in this county, brought forth a calf which weighed 99½ pounds before it was a day old. It is of the Durham breed.—*Lan. Dem.*

In serpents and fish, both jaws are moveable.

CONTENTS OF THIS NUMBER.

Norfolk Thin Rind Hogs, a letter from Wm. K. Townsend, Esq.—Lucerne, a letter from J. Cockey, Editorial remarks on—Lane's Horse Power and Threshing Machine—Profits of the Dairy compared with that of fattening Cattle—Locusts—Insects—Liquid Manure—Bone Manure—Dickson's Live Stock Manager—Hogs or Swine, from the same—Remarks on the Cause of the Curl in Potatoes—Easy way to Preserve Fresh Flowers—Directions relating to the Purchase of Land—Leisure Hours—Water and Steam—Catching Moles in the Neck of a Bottle—Overseer's Work—Large Calf—Serpents and Fish—Prices Current—Advertisements.

BALTIMORE PRODUCE MARKET.

☞ *These Prices are carefully corrected every* MONDAY.

	PER.	FROM	TO
BRANDY, Apple,	gallon.	$0 27	$—
Peach,	"	75	—
BEANS, white field,	bushel.	2 00	—
BEEF, on the hoof,	100lbs.	5 75	6 50
CORN, yellow,	bushel.	62	63
White,	"	62	63
COTTON, Virginia,	pound.	10	14
North Carolina,	"	11	12½
Upland,	"	11	14
FEATHERS,	pound.	—	37
FLAXSEED,	bushel.	1 00	1 25
FLOUR—Best white wheat family,	barrel.	6 50	7 00
Do. do. baker's	"	5 75	6 25
Do. do. Superfine,	"	5 00	5 25
Super Howard street,	"	5 00	5 25
" " wagon price,	"	4 75	— —
City Mills, extra,	"	5 37	5 50
Do.	"	5 12	5 25
Susquehanna,	"	5 25	—
Rye,	"	3 37	—
GRASS SEEDS, red Clover,	bushel.	—	4 50
Timothy (herds of the north)	"	3 50	—
Orchard,	"	3 00	—
Tall meadow Oat,	"	2 50	—
Herds, or red top,	"	1 25	—
HAY, in bulk,	ton.	15 00	16 00
Pressed,	100 lbs	—	90
HEMP, country, dew rotted,	pound.	6	7
" water rotted,	"	7	8
LIME,	bushel.	30	35
MUSTARD SEED, Foreign,	"	4 50	5 00
Domestic,	"	5 00	—
OATS,	"	31	32
OIL, linseed,	gallon.	85	90
Castor	"	1 70	1 80
PEAS, red eye,	bushel.	—	—
Black eye,	"	— —	1 00
Lady,	"	—	—
PLASTER PARIS, in the stone,	ton.	3 25	—
Ground,	barrel.	1 37	—
PALMA CHRISTA BEAN,	bushel.	2 00	—
RAGS,	pound.	3	4
RYE,	bushel.	71	— —
TOBACCO, crop, common,	100 lbs	3 50	5 00
" brown and red,	"	4 50	6 00
" fine red,	"	6 00	8 00
" wrappery, suitable for segars,	"	6 00	12 00
" yellow and red,	"	8 00	12 00
" yellow,	"	13 00	17 00
" fine yellow,	"	15 00	22 00
Seconds, as in quality,	"	4 00	5 00
" ground leaf,	"	5 00	9 00
Virginia,	"	4 00	—
Rappahannock,	"	3 00	4 00
Kentucky,	"	4 00	8 00
WHEAT, white,	bushel.	1 20	—
Red,	"	1 00	1 06
WHISKEY, 1st pf. in bbls.	gallon.	26	—
" in hhds.	"	23½	—
" wagon price,	"	20	—
WAGON FREIGHTS, to Pittsburgh,	100 lbs	1 50	—
To Wheeling,	"	1 25	—
		washed.	*unwash*
WOOL, Prime & Saxon Fleeces,	pound.	50 *to* 60	24 *to* 26
Full Merino,	"	40 50	20 24
Three fourths Merino,	"	— —	22 24
One half do.	"	— —	21 22
Common & one fourth Meri.	"	25 28	18 20
Pulled,	"	28 31	18 20

BALTIMORE PROVISION MARKET.

	PER.	FROM.	TO.
APPLES,	barrel.	$—	$—
BACON, hams,	pound.	10	—
Shoulders,	"	—	9
Middlings,	"	—	9
BUTTER, printed, in lbs. & half lbs.	"	18	22
Roll,	"	14	16
CIDER,	barrel.	—	—
CALVES, three to six weeks old	each.	3 00	6 00
COWS, new milch,	"	15 00	27 00
Dry,	"	9 00	12 00
CORN MEAL, for family use,	100lbs.	1 45	1 50
CHOP RYE,	"	1 56	1 62
EGGS,	dozen.	9	—
FISH, Shad, trimmed		—	—
" salted,	barrel.	6 37	—
Herrings, salted, No. 1 & 2,	"	3 87	—
Mackerel, No. 1, 2 & 3,	"	3 50	6 25
Cod, salted,	cwtt.	2 87	3 00
LAMBS, alive,	each.	1 25	2 00
Slaughtered,	quart'r	31	50
LARD,	pound.	8	—
POULTRY, Fowls,	dozen.	3 50	—
Chickens,	"	—	2 25
Ducks,	"	—	—
POTATOES, Irish,	bushel.	75	—
New,	peck.	50	—
VEAL, fore quarters,	pound.	6	—
Hind do.	"	8	—

ADVERTISEMENTS.

NEW HORSE POWER AND THRESHING MACHINE.

THE SUBSCRIBER, as agent of the Proprietors, for the sale of "Lane's Endless Chain Horse Power, and Threshing Machine," within the state of Maryland, offers for sale the above named implements together or separate. These implements have been used several years in New England and were last season introduced into Maryland. The Horse Power consists of a box or frame, 9 feet long, 4½ feet high and about two feet in breadth, the bottom of which is an iron chain, in the form of a band 15 inches wide, which revolves like an apron around two drums, placed near each end of the box. To the shaft of one of these drums, projecting beyond the side of the box, is attached a wheel of 27 inches diameter, around which a leathern band revolves giving motion to the Thresher or any other machine to be moved by it. The motion is communicated to the power by a single horse standing within the box upon the endless chain and by travelling upon it causing it to revolve around the drums, and thus give motion to the machinery. The Horse Power is *portable*, weighing only about half a ton and occupying no more space than 9 feet by two.

The Thresher is of small size, but very perfect in its construction, and sufficiently strong. When used, it stands by the side of the Horse Power, and is attended by three men. By the use of this apparatus three men with one horse can easily thresh in a day of good wheat from 80 to 100 bushels. If two horses be used alternately, each an hour, more than this can be done with ease. It threshes remarkably clean.

The whole apparatus, is strong and durable, and not liable to get out of order. A winnowing machine can be attached by a band and operate at the same time. This machine is confidently recommended to farmers as a thresher, and the Horse Power to Mechanics to drive various kinds of machinery.

PRICES.—For the Horse Power and Thresher together, with the privilege of the patent right for using them on a farm, two hundred and twenty five dollars. For other uses than threshing grain the Horse Power alone with the patent privilege is furnished for $150, to $175, and the Thresher will be sold alone for $50.

Address, I. I. HITCHCOCK.
American Farmer Establishment.

The PATENT RIGHT privilege for making, using, and vending these implements, in any county in Maryland, except Baltimore City and County, will be disposed of by the subscriber on very liberal terms. jy 1

WANTED,

BUCKWHEAT FOR SEED, by
I. I. HITCHCOCK,
May 9. American Farmer Establishment.

IMPROVED STOCK.

FOR SALE—A full blood Durham improved short horned BULL, two half blood yearling BULLS, also several half and three quarter blood HEIFERS of different ages. These cattle are immediately descended from the stock of the late R. Colling (of England) a celebrated breeder.

Apply to the Editor, or at the farm of the proprietor, near Taneytown, Frederick county, Maryland.
May 30 4t C. BIRNIE.

GRAY OR GAZE HOUNDS.

LAST September, I received from the President of the United States, for the beeding farm of this Establishment, a pair of these very beautiful and powerful animals, which had been sent out to him from Holland, by the American Consul there, and in vol. 15, of the American Farmer, page 233, I published the letter accompanying the very acceptable pesent. I have now the satisfaction to offer for sale four (female) puppies—their issue. They will be ready for delivery in all the month of July. Price $20 each. I. I. HITCHCOCK,
American Farmer Establishment.

TURNIP SPINACH & CABBAGE SEED.

A FULL supply of these seeds of several of the best varieties for summer and fall sowing, now on hand and for sale by I. I. HITCHCOCK,
july 1 Amer. Farm. Estab.

SUPERIOR TURNIP SEEDS.

WM. PRINCE & SONS, Proprietors of the Linnæan Garden and Nurseries at Flushing, have all the following varieties of turnips, growing for the inspection of those who desire to view them, and they can in consequence guarantee the excellence and accuracy of their seeds, which they offer in large or small quantities, at very moderate prices, to venders and all others.

600lbs Ruta Baga, or Swedish Turnip, of the superior purple top variety.
400lbs Large White Norfolk field, for cattle, &c.
200lbs Large Yellow Bullock, for cattle.
200lbs Fine Yellow Aberdeen, for cattle.
150lbs Yellow flat, for table.
300lbs White flat, for table and cattle.
250lbs White Globe.
250lbs Red top, or Red Round.
100lbs. Green Top, or Green Round.
100lbs Long Tankard, or Hanover.
150lbs. early white Garden Stone
200lbs. early white Dutch
100lbs. early yellow Dutch
100lbs. purple top yellow Scotch

Also, Dale's yellow Hybrid, Yellow Stone, six weeks, Red six weeks or Red Stone, Yellow Maltese, White Swedish, yellow Altringham, Swan's Egg, French Early long, French long Yellow, French black Sugar, Mousetail or six week, Scarisbrook, or Preston Yellow, Freneuse Avinteo, Berlin, or Teltan, &c. the whole forming a complete concentration of the choicest varieties obtainable in foreign countries or in our own.

They have also a most superior collection, comprising every other choice variety of vegetable, field and flower Seeds, most esteemed in European or American gardens, all of which they have likewise growing in specimen beds for inspection. A large number of the choicest varieties are entirely new. Catalogues with prices will be sent to every applicant, and orders executed with the utmost exactitude and dispatch

N. B. 1000 lbs. superior Provence Lucerne.
july 1 1t

THE COMPLETE FARMER.

JUST PUBLISHED and for sale at this establishment, price $1, "The Complete Farmer and Rural Economist, containing a Compendious epitome of the most important branches of Agriculture, and Rural Economy. By Thomas G. Fessenden, Editor of the New England Farmer." "Agriculture is the art of arts: without it man must be a savage, and the world a wilderness."
june 24

BUCKWHEAT.

THIS article is very scarce and high in price in our market this summer. I have however obtained a small quantity for seed, which I offer to my customers at $1 50 per bushel. I. I. HITCHCOCK,
June 17. American Farmer Establishment.

IN a season like the present when the grass crops are not so abundant as usual, MILLET must be deemed by the farmer an important and eligible substitute. With this view I have procured a small quantity of the seed, which I offer for sale at $1 50 per bushel.

I have also as usual a full supply of Ruta Baga, white flat and many other kinds of TURNIP SEED, which I believe is of first quality. Also Early French, Early York, Early George, Early Sugarloaf, and sundry other kinds of CABBAGE SEED, which I know to be genuine.

Also, a full and general assortment of GARDEN SEED, including nearly every article in that line.

I. I. HITCHCOCK,

THE FARMER & GARDENER;

AND LIVE-STOCK BREEDER & MANAGER.

CONDUCTED BY I. IRVINE HITCHCOCK, AND ISSUED EVERY TUESDAY FROM THE AMERICAN FARMER ESTABLISHMENT, AT $5 PER ANNUM, IN ADVANCE.

No. 11. **BALTIMORE, JULY 15, 1834.** **Vol. I.**

☞THIS publication is the *successor* of the late

AMERICAN FARMER,

(which is discontinued,) and is published at the same office, at five dollars per year, payable in advance.

☞When this is done, 50 cents worth of any kind of seeds on hand will be delivered or sent to the order of the subscriber with his receipt.

American Farmer Establishment.

BALTIMORE: TUESDAY, JULY 15, 1834.

An Editorial CONUNDRUM *of great* INTEREST. —We have recently caused most of our subscribers to be in a certain respect like birds; and we now ask them in *what* respect?

GARDENING LABOR FOR JULY.

It is a great point gained in the prosecution of any business, for those who direct its operations, to have a clear and systematic plan of procedure thoroughly digested, and all its parts matured in proper order before the full time of execution.—With the view of calling the attention of our readers to such an order of procedure, we make a statement of the principal items of labor which become necessary to be done, in the Garden, in the present month, July.

A considerable latitude may be taken in regard to time when the season is particularly favorable, for planting the seed or for transplanting roots; and much may be gained by selecting a soil particularly adapted to the individual plant you are raising. We have seen it recommended to transplant all vegetables after 4 o'clock, P. M. and believe it to be a very good practice; as the evening dew invigorates them after they have undergone the excision of their roots by being extracted from the earth; and the moisture which is imbibed by the leaves from the atmosphere during the following night keeps up the supply of sap for circulation in the extremities of the plant and roots, and prevents that collapse of the extreme vessels which would necessarily follow were the plants exposed to the heat of the sun, before the roots had time in some measure to resume their accustomed operation by absorption from the earth.

Bridgeman says:—July, this is a very important month for transplanting Cabbage Cardoon, Celery, Endive, Leek plants, &c. for full autumn crops. Prepare trenches for the Celery plants before-hand, in order that they may be ready to catch the rain. Leeks may be transplanted in dry weather by first steeping the roots in mud, and Cabbage plants too, if there be the least damp in the ground when its fresh turned over. If Cardoons or Celery be planted in dry weather, the trenches must be shaded with boards. As grub worms are generally numerous early in this month, plant with caution; try a few Cabbage plants first, and if none are eaten off you may venture to proceed, and by the middle of this month the danger is generally over.

If Beets and Carrots have failed, the seed may produce good roots by autumn, if planted early in this month; plant Beans; Cabbage seed may be sown now for Collards; plant Cucumber seed for picklers; sow Endive seed, and transplant the former sowing; if Peas be planted now, they should be soaked in soft water five or six hours previous; Potatoes may be planted early in this month; and Pumpkins if not done last month. Sow black Spanish Radish seed in drills; sow Turnip-rooted Cabbage seed or *Navet;* this is a good season for *Ruta Baga* or Russian Turnip; and the common kinds of Turnip seed may be sown towards the end of this month. Attend to plantations of Hops; whatever herbs may be required for winter use, should be cut off and dried as they come into flower, Burnet, Chervil, Fennel, Mint, Parsley, Sweet Marjorum, Tarragon, Thyme, Winter and Summer Savory, may all be cut this month. The flower garden should be kept weeded and watered, and the seeds gathered as they ripen; apply neat rods to the tall growing and running kinds of plants; such hardy bulbs as may require to be removed, may be taken up as the tops wither, after which, the offsets may be parted off, and both these and the parent bulbs dried, for planting in autumn. Roll gravel walks and attend to the lawns, edgings, &c. Look over your fruit trees and grape vines; stop the shoots before the bunches of fruit, and train up such shoots as are reserved for bearing next year. Nip off curled and dead leaves and destroy insects.

CURRANT WINE.—We give below a recipe for making Currant Wine; we received it from one of our neighbors, whose domestic wine we have often partaken of, which was made according to the receipt given. It was according to our taste quite equal to the wines commonly sold as imported.

Take of expressed currant juice,	8 gals.
Clear good water,	16 "
	—
Gals.	24

To each gallon of the mixture,

Take three pounds of Muscovado sugar,

Or 72 lbs. for the twenty-four gallons.

Mix these ingredients and put them into a clean cask, taking care that the cask be perfectly filled and kept so—lay the bung loosely over the bung hole and suffer it to remain in a cool place for three or four weeks—then put the bung in tight, leaving open only a small vent hole for the escape of the air, formed in the process of the vinous fermentation, until winter or in the next spring. At that time rack it carefully into a well cleaned cask. If this process is performed by means of a syphon so as to exclude the contact of atmospheric air, as much as possible, it will be the better. Then bung up tight—being careful that the cask is perfectly full, for upon the exclusion of atmospheric air the success depends. In one year this will be found one of the best of drinks to mix with water.

HUMILIATING LESSON.—The sentiment contained in the following remark of Sir Humphrey Davy, has often occurred to our mind, as among the most plain, familiar, and at the same time incontrovertible evidences of the supervision and direction of a Supreme Intelligence, whose ways and views are infinitely above and beyond the comprehension of feeble man, in his utmost pride of science.

"There appears nothing more accidental than the sex of an infant, yet take any great city or any great province, and you will find that the relation of males and females is unalterable. Again, a part of the pure air of the atmosphere is continually consumed in combustion and respiration; living vegetables emit this principle during their growth; nothing appears more accidental than the proportion of vegetable to animal life on the surface of the earth, yet they are perfectly equivalent; and the sexes, like the constitution of the atmosphere, depends upon the same unerring intelligence."

THE FARMER.

LINNÆAN GARDEN, July 7, 1834.

To the Editor of the Farmer & Gardener:—

DEAR SIR:—We transmit you, herewith, an account of Dale's Yellow Hybrid Turnip, from the pen of Mr. Lawson, and recently published in England.

Yours, &c.

WM. PRINCE & SONS.

ON A HYBRIDAL VARIETY OF THE TURNIP.

Since the period when Linnæus clearly demonstrated the functions of the anthers and stigmas, numerous additional evidences have been adduced in support of the doctrine of the sexes of plants. The question has long been set at rest, and it would be now, in botany, a heresy of the first order to throw doubts on the theory of impregnation. In fact, that process is performed by the contact of the sexual secretion of the male plant, or the male organs of the hermaphrodite plant, with the female organs. Upon this hint, botanists have not only observed many of the curious contrivances to which nature has had recourse in rendering sure the process of impregnation, but have let loose their imagination, and invented others for her. It is well known, that, in the animal kingdom, a male and a female of two different species belonging to the same genus, may occasionally, by the force of circumstances, break through the antipathy in which they hold each other, and that a progeny participating of the forms of both parents may result. It might be imagined that in plants such intermixtures should be of more common occurrence. The pollen, wafted by the winds, or conveyed by bees and flies, may be applied to the stigmas of other species as readily as to those of its own. Yet, whether it be that the germens are impregnated by the pollon of their own flower, before any other pollen reaches them, as is undoubtedly the case in most plants, or that there is an organic inaptitude between the pollen and the stigmas of different species, it so happens, that in a field where there exist multitudes of flowers of numerous species, many closely allied to each other, one cannot, on searching, find a single hybrid. Nevertheless, that hybrids have occasionally been produced, we have abundant evidence. Kölreuter, for example, crossed the Nicotiana rustica and Nicotiana paniculata*. The genera Brassica, Geranium, Ranunculus, Saxifraga, and others, are supposed by some, from a few original species to have produced their present multiplicity of forms. To the numerous varieties of Melons, Strawberries, and other cultivated plants, a like origin has been attributed. In the animal kingdom, hybrids produced in the wild state are extremely rare, and when produced in the domestic state, do not continue their mixed form. Hybrids of wild plants are also, as has been stated above, comparatively rare; and, as we see the same forms reappear season after season, we must suppose that if they exist, they are only of ephemeral duration. The case, however, is different in cultivated vegetables, of the crossing of two of which an instance is here related. The crossing here is between the Common Turnip, *Brassica Rapa*, and the Swedish Turnip, which some suppose a distinct species, and others merely a variety of the former.

Though there is a considerable number of varieties of the turnip in cultivation, which are more or less held in esteem according to their supposed qualities, the nature of the soil in which they are to be grown, and other circumstances, those in most general use are the White Globe, the Red-Top Yellow Bullock, the Green-Top Yellow Bullock, and the Swedish. The White Globe grows to the largest size, arrives soonest at maturity, and decays earliest in the season; the Yellows are intermediate between the Globe and the Swedish in their properties; and the Swedish is smallest in size, is latest in arriving at maturity, and often does not decay, till, in the advanced state of the following spring, the plant loses its nutritive properties by pushing out a flower-stem; hence the Swedish is well adapted and chiefly employed for spring feeding. The Swedish Turnip possesses the greatest nutritive powers, and the largest of this variety yields more nourishment in proportion than the middle-sized ones; while the Globe, which attains the greatest bulk, contains the least nutritive matter, and the large, kinds less proportionally than the middling-sized ones of the same variety.

New varieties or hybrids of turnips are obtained by cross-impregnation. Thus, when two varieties are planted alternately or promiscuously in a plot of ground, when they come into flower the pollen is wafted by the wind indiscriminately over the whole, or carried from one plant to another by insects, when they are in quest of the sweets of the nectary, and applied to the stigmata. But though the means of producing new varieties are simple and easily accomplished, little improvement in this respect has been made in the varieties now generally used in field culture.

In all cases of turnip seeds going through my hands in the course of a season, I keep specimens, which are sown at the proper period in drills in my nursery. This is done for the purpose of examining the progress of the plants and the developement of their roots during the season; it also enables me to ascertain the correctness of the different stocks of seeds, and to judge of the superiority of one variety over another. Two years ago, my attention was particularly attracted to the produce of the sample of a hybrid or doubly-impregnated sort, the seed of which I received from Mr. Robert Dale, a very intelligent farmer at Libberton West Mains, near Edinburgh. It attracted my attention, first, on account of its early growth and maturation; secondly, its fine shape; thirdly, by the great size to which it attained, in comparison with any sort under similar treatment; and, lastly, by its standing the winter equally well with any other turnip except the Swedish.

And conceiving that the great desideratum in the selection of a proper variety of the turnip, is to obtain the greatest possible weight on a given space and at a given expense of manure, this variety seems to be more adapted to this end than any other sort hitherto introduced.

The manner in which it was obtained by Mr. Dale, was the following: In the year 1822 or 1823, he got a few ounces of seed of a new hybrid turnip from James Shireff, Esq. of Bastleridge in Berwickshire. This, Mr. Dale sowed, and he found the produce to resemble the Swedish in shape, but it had too few of the superior properties of that variety. He, therefore, picked out such as had most of the yellow appearance, and planted them along with some of the best Swedish which he could find. This he continued doing for four successive years; and, since that period, he has selected the best roots of the doubly impregnated kind which he could find for raising seed, till they have attained the quality which they now possess.

The manner in which this variety has been obtained, I am aware, is not according to the nice rules which horticulturists would have recommended to be adopted, because, as the hybrids were always planted along with the Swedish for producing seed, and the seed collected promiscuously, that part of the seed which was produced from the Swedish would be much more nearly allied to that variety than the seed of the hybrids. But in this, as in many other instances of improving plants, the point is often attained more from accidental causes than from the adoption of the rules laid down by scientific cultivators. And, although all the hybrids may not stand in the same relation to the primitive root, the circumstance of the raising the seed being now performed solely by the hybrids themselves, without the assistance as formerly, of the Swedish, will always have the tendency to assist in modifying and correcting any irregularity that may exist. Indeed, judging from the appearance of the present stock, there is nothing which indicates any important consequences to this irregularity in the manner of obtaining the hybrids.

To show in what respect this hybrid is superior to, or differs from, the turnips in present cultivation, I shall give a list of the kinds sown for different purposes, with a comparison of their properties with that of the hybrid in question. The turnips in general cultivation are the following.

For early use,

White Globe,
White Tankard,
Pomeranian Globe,
Hungarian Globe,

} The hybrid is equal in size to any of these, is closer in the texture, and is as early.

To succeed the above,

Red Norfolk,
Green Norfolk,
White Norfolk,
Green Globe,
Red Tankard,
Yellow Globe,
Bullock's heart,

} The hybrid is superior in size, in texture, and in shape, to all of these.

Still to follow these,

Purple-top Yellow Bullock,
Green-top ditto,
Tankard Yellow,

} The hybrid is superior in size, and, in so far as it has been tried, it stands the winter as well.

* Within these few months, different species of Calceolaria have been successfully crossed at the garden of Lord President Hope at Granton, as described by Professor Graham in the Edinburgh Philosophical Journal for July, 1830. All the fine new Pears, Apples, and other fruits, of Mr. Knight in England, and those of the Earl of Dunmore in Scotland, which are nowise behind them, have been produced by dusting the stigma of one kind of blossom (previously deprived of its stamens) with the pollen from another.

For late use,

Purple-top Swedish, Green-top Swedish, } The hybrid is superior in size, but shoots to flower earlier in spring, and is not so hardy.

This hybrid, or doubly impregnated turnip, therefore, appears to possess properties in general, superior those varieties which have been enumerated above. It is equal to, or surpasses the yellow, and the other sorts above it, and is only excelled by the Swedish, in the latter being more hardy and later in the spring in running to a flower-stem. It is now generally known by the name of Dale's Turnip, or Dale's Hybrid.

The facts which I have stated will, I trust, be considered in this respect interesting, that they show an easy method by which intelligent agriculturists may increase or improve the varieties of the plants which they cultivate.

[From the Farmer's Assistant.]

CHANGE AND IMPROVEMENT OF SEED.—Most plants are found to be degenerate to a certain degree, unless their seeds are frequently changed. This has been attributed to their cultivation in climates where they are not indigenous. But this can hardly be the sole reason; for it is found that most plants will be improved, by having the seeds brought from the east to the west, and *vice versa*.

Providence, in making so large a world as this, seems to have designed that there should, nevertheless, be a common acquaintance among the Nations which inhabit it. They are invited abroad, for conveniences which their own climates do not furnish; they are impelled to a general intermixture, from a knowedge that it is beneficial; and the benefits to be derived from a change of seeds, are probably only in furtherance of the general design of a community among Nations.

But we are yet much in the dark, as it respects the best changes of seeds, and from what parts of the world they should be brought, to produce the greatest crops. Ought not this to become a matter of more general concern? The Irish Farmers sow our flaxseed, and find great account in it. Would their flaxseed be equally beneficial, when sown here? We have known flaxseed brought from Long Island, and sown in Orange county, which produced nearly double the crop which the common seed there produced. Spring wheat brought from Canada, and sown here (Herkimer county,) greatly enhances the crop; but soon degenerates. Siberian wheat yielded largely in this country, for a while. The seeds of apples brought from Europe will produce trees larger than our own. For roots, it is generally supposed that seed brought from a more southerly climate are best. Indian corn, brought far from that quarter, will be in danger of ripening too late: that brought far from the north will ripen too early for a large crop. On the whole, the Farmer should make his changes as judiciously as possible; and in most instances he will then find the product of his crops greatly increased.

But, in order to prevent seeds from degenerating, by long use, we are of the opinion that the plan pursued by *Mr. Cooper* of New Jersey, will be found effectual; though we believe that seeds, improved according to this plan, would undergo a further improvement, by a suitable change of place.

His method is to make frequent selections of the most *perfect* plants of every kind, and to cultivate the seeds of these by themselves, for the purpose of raising new and improved stocks of seed of every kind; and further, when he raises seeds of plants, of which there are different *species*, he is careful to set or plant them as much as one hundred yards from each other, in order that in propagating they should not mix breeds, and thus produce spurious or degenerated seeds, partaking more or less of the qualities of each plant.

Seeds are also sometimes susceptible of improvement, by growing *varieties* of the same plants together, for the purpose of obtaining seeds of a medium between the two. But we will further illustrate these matters.

Thus, in making selections in wheat, for instance, search for such heads as have the largest seeds, and the greatest number in each head. In Indian corn, of any particular variety, for stalks of good size, with the greatest number of ears on each, and the ears the largest, most perfect of the kind, and the best filled. In flax, for the longest stalks, and such as have, at the same time, seeds of good size. In pumpkins, for such stalks as bear the greatest number, and these the largest, and sweetest. In short, in making the selections, take the most perfect and valuable plants to be found, of whatever kind is wanted, and from each of these raise the progeny that is to serve as the stock for seed of the different plants to be cultivated.

In many kinds of plants, such as Indian corn, pumpkins, &c. the selections may be yearly repeated, without any essential inconvenience. In others, such as wheat, barley, &c. yearly selections would be too expensive. In such, let selections be made, say, every eight years; and from the seeds of the plants thus selected raise a yearly stock, sufficient to serve for seed. The more constantly the selections are made, however, the more valuable may the products be expected from such seeds.

In regard to the means just mentioned, for preventing a degeneracy of seeds, by the intermixture of different *species* of the same plant, we will state a case. Of the *Brassica* tribe of plants there are different *species*, and also *varieties* of two of these, *to wit:* cabbages of several varieties, common turnips of several, and the cabbage-turnip, or ruta-baga, of which there are no varieties. The cabbages are valuable for their heads, or leaves; the common turnip, for its bulbous root; and ruta-baga for its bulbous stalk.

Now, if seeds for ruta baga, and for cabbages, were constantly raised beside each other, the consequence would be, that the bulb of the former would become less, and its foliage more extended; while the head or foliage of the cabbage would lessen, and its stalk become somewhat bulbous: and if all the species and varieties of the plant were constantly grown together, for seed, they would gradually become more assimilated, and the most valuable parts of each, of course, lessened in product.

But sometimes an improvement of seed is to be effected, by growing varieties of the same plant together. Of Potatoes, for instance, there are many varieties, some preferable for one particular quality, and some for another; some for greatness of product, and others for mealiness, and fineness of taste; and in such case, by growing them together, a race is produced which in part partakes of the good qualities of each.

The same may be observed of many other plants; and in some instances, perhaps improvements might be made by blending the most valuable qualities of plants of different species together.

Such we conceive to be the doctrine of Mr. *Cooper;* and we are of opinion that in general it is well founded. Mr. C. also contends, and we think with much truth, that there is a natural disposition in all seeds or plants gradually to become habituated to the soil or climate in which they are grown.

THE BREEDER & MANAGER.

[From Dixon's Live Stock Manager.]

Disposition.—This quality materially depends upon the manner in which animals are brought up. It is well known that Mr. Bakewell rendered all his live stock, even his bulls, so tame and gentle that the management of them was attended with very little difficulty or trouble. It is a matter of extreme utility and importance to all breeders, that their domestic animals should be of mild dispositions, without being dull or sluggish, as they are then capable of being reared, fed, and rendered fat, with considerably less food, and with much more facility, than when they are wild and unruly, and disposed to ramble and break the pastures. Animals when young may be rendered gentle, in most cases, by careful management.

A calmness and placidity in the appearance of animals, without that prominence or boldness of the eye, which often indicates badness or unruliness of disposition, give the most certain marks of that temperate steadiness and evenness of temper, which is so necessary for quick feeding, and so desirable in many sorts of live stock. But such a natural tendency, so displayed in the aspect of an animal, may be changed by bad usage, disease, or other uncertain causes.

Hardiness of Constitution.—This is the next property in neat cattle that deserves the breeder's attention; it is indeed absolutely essential and indispensable in exposed situations, and under all circumstances it must be advantageous to the farmer that a breed is not liable to disease. Every one must be convinced that hardy animals thrive much better than those which are naturally tender and delicate. Darkness of color, as before observed, and roughness of hair have been commonly supposed to denote hardiness and vigour; but animals of other colors have proved equally robust and hardy. It has been already mentioned, that color has led to many fallacious opinions, and is, consequently, no absolute criterion. Hardiness of constitution chiefly depends on the breed and the manner in which animals are brought up.

It is a fallacious notion, that exposure to all the the risks of climate contributes to the hardiness of live stock. Domestic animals should not be allowed to bring forth in exposed situations,

whereby they are subject to the injuries of wet and cold. In the summer season only, they can remain with safety unsheltered; but in winter, spring, and autumn, they require outhouses, sheds or well-sheltered fold-yards, to protect them from the cold rains and piercing winds. All new dropped animals, as may be rationally expected, are extremely susceptible of the impressions of cold; and indeed the dams also, on account of the temporary debility occasioned by parturition. Though many of the young animals thus exposed escape the dangers of wet and cold, yet several fall an immediate sacrifice, and more perhaps are consequently afflicted with latent disorders, which considerably obstruct their future improvement; and though the dams are not so often fatally affected, yet they frequently sustain injuries which can never afterwards be effectually removed. The state of wild animals has been referred to as a proof that domestic animals of the same kind should be inured to the inclemency of the seasons: but the numbers of animals which perish in their natural state, and which might be preserved if domesticated and gradually exposed to the cold, can never be ascertained.

In the most hardy breeds there are always some individuals, which no possible means will render equal in that particular to their fellows; and yet with proper care, they may be rendered equal to them in profit.

Early Maturity.—The amount of profit to the breeder must always depend, in a great degree, on the quick maturity of his domestic animals; and indeed it is a property that greatly interests the public as well as the farmer, for it is obvious, that abundance of supply is, in a great measure, connected with early maturity. Some sorts of cattle stock, on account of their labor or their produce, may probably be kept longer with profit by the farmer than others; such is the case, it is supposed, with neat cattle, though not with sheep; yet the latter is productive in various ways, so that this distinction appears not to be well founded. Undoubtedly the manner in which animals are fed must have considerable influence in the raising of live stock; for when, from the constant supplies of food, they are always kept in a thriving condition, they will, whatever the nature of the stock may be, arrive much earlier at the state of maturity than under the contrary circumstances. It has been asserted, that under this mode of treatment a greater progress is made in three years than is effected in five when the animals are stinted in food, and suffered, by the want of proper care and warmth, to be stunted or stopped in their early growth. It has been long a remark, that "cattle well *summered* are half *wintered;* that is to say, cattle going to the straw yard in high condition will preserve a good plight throughout the winter; whereas, such as have been fed upon short fare during the summer, and go to straw in a weak condition, are liable to become worse, or even to drop off in the winter season, particularly if it be unfavorable. Very young cattle and old cows are the most dangerous stock under these circumstances." But whatever influence the nature of the keep may have, as one breed or sort of animals, under exactly the same kind of keep, reach the point of perfection long before another, it is evident that the principle must exist and be inherent in the quality of the breed or variety itself, and that consequently this property must be well attended to in choosing animals of all kinds for the purpose of breeding. It would appear to be much connected with disposition and shape, though not wholly depending on them.

Flesh.—The nature and properties of flesh are of much consequence to the breeding and grazing farmer; yet after the observations which have been made on the size of animals, it is not so necessary to say much respecting the quality of flesh; which seems, according to some, to be a property inherent in the muscular substance, and probably depending, in a great measure, if not wholly, on the breed. A writer, in speaking of the breeding of animals in the midland districts, where the flesh is "spoken of with the same familiarity as the hide or the fleece," observes "that the grain is clearly understood to depend wholly on the *breed*, and not, as has been heretofore considered, on the *size* of the animal." It has been intimated that white and light colours may be preferred for the tenderness of the flesh; but "colour is probably, in a great measure, fixed and inherent, and the sole effect of breed," while "the difference in the flavor of the flesh of different breeds or varieties of animals appears to depend in a great degree, on the nature of the food." This supposition seems more rational, and there is little doubt but that proper keep will always be found advantageous in this respect.

Sometimes a very material deviation from the natural color of flesh is met with in meat which is probably the effect of a morbid condition of the animal. In the living state, the proofs of good flesh are a mellow, rich, elastic, and rather firm feel, without any degree of harshness; and in the dead condition, a similarity of feel, with a fine grain and marbly appearance. No doubt the difference of age and sex affords some variety in respect to the quality of flesh, for in old animals it is more firm, but less tender and juicy than in those that are young; and though the fineness of the grain is more remarkable in animals of the female than those of the male kind, yet the flesh of the latter when young is more nutritious and palatable. Every body prefers a round of ox beef to that which contains the udder; and a leg of wether mutton is more desirable than an ewe one.—Some of the more northern breeds of Scotch cattle are said to excel much in the quality of their flesh when well fattened and killed at a proper age. The property of flesh apppears in some degree connected with that of disposition to fatten.

With a view to the raising improved cattle stock, it is important to caution those who have not had much experience in the art against a certain sort of animals, which have the term *light* fleshed usually given them; to which there is an objection, "not on account of the quality of the flesh as regards richness, but the deficiency of its quantity when the animals 'are' in a lean state;" and which when seen in their full fat condition, "for want of better judgment," and the ability "to distinguish between fat and lean," may attract a preference. In this kind, it is noticed, there is a want of profit to the grazier, as well as to the consumer. "They are not profitable to the grazier; first, because they are naturally tender;" and then further, "they carry so small a quantity of flesh in their lean state, that they have much to do when put to feeding before they come to any tolerable weight." Nor do they afford profit or saving to the consumer; "for fat without lean is of no other use than to be wasted in the kitchen." In all cases, when found in the hands of breeders, it is noticed to be where the practice "of keeping their stock is remarkably high; and when they are sold, and kept as store stock, they bring a considerable loss to the purchaser, and disgrace on the original possessor. It is therefore justly considered desirable, that this sort of animal should soon be exploded in neat cattle, as it has been long ago in the variety of light-fleshed new Leicester sheep." Such animals are wholly improper for the purposes of the careful breeder.

In the same view it is further noticed, that "there is another kind which carry plenty of lean flesh, but of a bad quality." The animals in this case "are invariably slow feeders; and may always be discerned by the touch, the flesh being naturally hard." Of such kind, "some are so bad that when put to the best keeping, and continued at it ever so long, they will scarcely have a stone weight of fat either within or without." This sort is also improper in the view of the cautious breeder.

It is conceived that "the perfection of breeding, as far as flesh is concerned, is a great quantity of rich lean flesh in the first instance, which, when the animal is well kept, will soon be covered with a proper proportion of fat." Such too are found to take "not only a shorter time in preparing for the stall than any other, but their beef will also sell at a higher price, being of the very first quality, and of a kind that is eagerly sought after for the first tables." It is not to be supposed that this sort can never be made too fat; they may be very much so; which is to be prevented when necessary, by lessening the allowance of time in the fattening process.

On the whole, it is concluded that "it is not the animal which has scarcely any flesh when at store keeping, and which, when fed, will consist almost of fat alone, that is the most profitable, either to the grazier or to the consumer: nor is it the animal whose flesh is ever so abundant, if hard and bad, and incapable of having its proper quantity of fat; but it is *that*, which, when at store pasturage, only carries a great quantity of rich lean flesh; and which, by good keeping, may be made as fat as we please." The first of these sorts of stock is considered nearly as unprofitable as the second, though it may on some occasions have been injudiciously recommended.

The true principles of breeding neat cattle teach us, that they should constantly be raised with the view of good flesh or meat, and not offal; when they are for the purpose of the grazier or the feeder; and consequently that all those parts which are supposed inferior, such as the head, neck, legs, bone, and others of the same nature, should be fine and light; but still this notion ought not to be carried too far, as benefit or profit may not always arise from it, nor can a beast be, in many cases, made to fatten on the best parts, without, in some degree, doing the same on those, which are more coarse and of less value in their sale to the consumer.

Propensity to Fatten.—The profit of the gra-

zier depends in a great degree on this disposition; for where it does not prevail, much of his food must consequently be expended in vain. As some animals become fat with a very small consumption of food, and others that eat large proportions still remain in a lean state, the circumstances on which the property of fattening depends, can never perhaps be satisfactorily defined. This property is probably in some measure connected with smallness of bone; or it may be that a tendency to fatten arises from some particular circumstance in the internal structure of the body, of which small bones are in general an indication, and that it is only in this point of view that they ought to be considered essential: for they often weigh as heavy, and consequently require as much nourishment as large ones. Indeed cattle ought not only to be easily maintained in point of quantity, but the quality also of the food they consume should be considered; as it is certain that some particular animals will fatten as well on coarse fare as others will do on the most luxuriant. Hence, it appears, that this disposition depends greatly on the shape and breed of the animals, as the practice of Mr. Bakewell, and other breeders incontestably proves.

It has been stated by an ingenious and able writer of one of the midland Agricultural Reports, that he is inclined to suppose, a large animal, with an aptitude to fatten, will, on fair keep, be as soon fattened as one of a much smaller size; and that though it is thought that cattle stock should be chosen so as to suit the nature and strength of the land, especially where it is of an extremely good quality; yet that he has met with many instances on land of but middling quality, where a large animal that is inclined to fatten will improve as much, and in as little time, as a smaller one; and it is believed, that the large Durham ox did not eat more food to raise him to that enormous size, than some others would consume to bring them to half the dimensions or weight at the same age. Nor is there any reason to suppose that the great Lambert of Leicester, who reached such an amazing weight, had eaten more food than Powell, the noted pedestrian, who was a very thin man. Consequently, the obvious conclusion is, that an animal for the use of the butcher is seldom too large, if it have an aptitude to fatten, and that much in this respect depends on the constitution of the animal.

Many farmers never fatten any cattle except in the grass season, and then only such as they have kept during the winter on straw; but the policy of this practice is disputable on account of the undue proportion of fat thus produced; which, with a view to consumption as food, cannot be considered so useful or economical as the lean.

It has been long an observation among graziers that "good fat makes good lean"—if there be a superabundance of fat, therefore we may perhaps impute the fault to the grazier, and not to the nature of the breed. Fat meat, though not so fit for common use, is in general considered as affording more nourishment than lean, when the state and vigor of the stomach are suitable for digesting it; and though, according to the common modes of cooking, there may be some loss, yet, by proper attention, such loss may be almost wholly avoided, as is the case in many places. But as the lean of fat will mostly be preferred, the disputes respecting the utility or inutility of fattening animals to the great degree that has often been the custom, must of necessity have proceeded from the want of sufficient discrimination: for, in regard to the goodness of meat of the beef kind, it may be noticed, that that which is afforded from over-fed large beasts is rarely so good as that where they are not too much fattened; and, that when small beasts are too much fattened, the meat is often of an oily quality, and in some cases, as black as that of the horse, so that really good beef probably depends on the nature of the breed, the proper method of feeding, and the age in which the animal is in the most perfection.

The just combination of form, the easy disposition of the animals, and the naturally inherent qualities of the breed or variety, are therefore principally to be regarded by the breeder in his designs of gaining, promoting, or improving this property.

Hide, or Skin.—This is a property that should also be attended to in the breed of animals, as it in some measure furnishes the means of determining the disposition to fatten, by the feel which it affords. It is remarked by some, that when it feels soft and silky, it strongly indicates a tendency in the animal to take on meat; and it is evident that a fine and soft skin must be more pliable and more easily stretched out to receive any extraordinary quantity of flesh than a thick or tough one. At the same time, thick hides are of great importance in various manufactures. They are also necessary to the animals in cold countries, where they are much exposed to the inclemency of the seasons; and thus we see in the best breeds of Highland cattle, the skin is thick in proportion to their size, without being so tough as to be prejudicial to their capacity of fattening.

In good cattle stock, the hide has a particular mellowness, fineness, and sleekness in handling, which invariably denotes a healthiness of habit. Coarse, rough, thick hides show a hardiness of flesh, while a fine texture in the hide is discovered by a fineness and closeness of feel in it; and the shorter and more sleek the pile and growth of the coat are, the more thriving is the condition of the beast; while, on the contrary, the longer and hardier are the more unthrifty. These points and properties in the hides of animals are always to be well regarded by the breeder in selecting them for that purpose. But though hard-fleshed beasts are mostly covered by a thick, hard skin, there are among cattle some, which though extremely inclined to feed and get fat, have nevertheless hides of a substance by no means hard, but rich and mellow in the feel. Such are particularly desirable, as protecting the animals well against the severities of climate that are usually taking place. Very thick and very thin skins are equally improper as denoting hard flesh or tenderness of constitution.

A gentleman in this town employed an Irishman to trim a number of fruit trees—Pat went out in the morning, and returning at noon was asked whether he had completed his work. No, was his reply, "but he had cut them all down, and was going to trim them in the afternoon."—*Lowell Balance.*

[From the London Lancet.]

Lectures on Veterinary Medicine,

Delivered in the University of London, by Mr. Youatt.

LECTURE II—CONCLUDED.

Nasal Bones of the Dog.—The nasal bones of the dog are very small. This is the case with all carnivorous animals. Instead of constituting the roof and part of the outer wall of the nasal cavity, as in the animals that have passed in review before us, the nasal bones form sometimes only a *portion* of the roof. The superior maxillaries here swell into importance, constituting the whole of the outer wall, and sometimes too, a part of the roof. The jaws are the weapons of offence and defence here, and as much space as possible is devoted to the insertion of those muscles which enable the animal to seize and hold his prey. One of the most powerful of these muscles, the masseter, rises from the superior maxillary bone, and spreads over its whole extent, and therefore that bone is developed while the nasal is compressed into a small space. The substitution of a portion of cartilage instead of bone at the posterior part of the orbital ring, in order to give more room for the play coracoid process of the posterior maxillary, round which the temporal muscle is wrapped, is a contrivance of the same nature. The scent of the dog is not sacrificed or impaired by the diminution of the nasals, for the cavity enlarges considerably upwards, and is occupied chiefly by the æthmoid bone, which, the olfactory nerve first passing through it, and the greater portion of nervous pulp being spread upon it, seems to have most to do with the sense of smell.

The nasal bones in the dog are, in shape, the reverse of any that we have yet considered.—They commence, indeed, as high up in the face as those of the horse, their superior extremity being opposite to the lachrymal tubercle; but they commence in an apex, or point, varying in sharpness in different breeds, and in some almost as sharp as any that we have seen at the lower extremity of the nose in other quadrupeds. These points, forming together one sharp projection, are received between lengthened processes of the frontal bone on either side. In some breeds, these processes extend nearly one-third of the length of the nasals. The superior maxillary takes the situation of the nasal; it pushes the lachrymal bone out of its place, and indeed, almost annihilates it; and it reaches the frontal, and expands upon it, and forms with it the same squamous denticulated suture which we have seen in the nasal in all the rest. The action of the muscle, for the development of which all this sacrifice is made, is exceedingly powerful. The strength of the masseter in the dog, and in all beasts of prey, is almost incredible. A lion will run at a great pace with a tolerable sized steer in his mouth.—In many old dogs the sutures between the superior maxillary and frontal bones are, nearly, and that between the nasal and frontal and superior maxillary, quite effaced. The whole is one solid mass of bone.

As the nasal bones proceed downward, they become a little wider; they unite with a long process of the anterior maxillary, as in the swine, for the purpose of strength, and then terminate in a

very curious way. They have their apices or points on the outer, and not the inner, edge of the bone, and these apices or points are so contrived, that, lying upon and losing themselves on the processes of the anterior maxillary, they complete, superiorly and posteriorly, that elliptical bony opening into the nose, which was commenced by the anterior maxillary, anteriorly and inferiorly. The nasal cavity of the dog, therefore, and of all carnivorous animals, terminates very differently from what it does in herbivorous animals, by a somewhat circular opening, running more or less into the form of an ellipse.*

Fracture of the Nasal Bones of the Horse, and its Treatment.

Cause.—Fracture of the nasal bones of the horse will sometimes occur from falling, or a kick from their companions, or the brutality of their attendant.

Effects.—It is generally accompanied by laceration of the pituitary membrane, and hæmorrhage. The hæmorrhage may usually be arrested by the application of cold water. In spontaneous hæmorrhage this does not often succeed; but here we know precisely the spot whence the bleeding proceeds, and at which the cold is to be applied. The fractured portion of bones is usually depressed, and the calibre of the little open space which the æthmoid and turbinated bones leave in the nostril being diminished, difficulty of respiration occurs. I had once a case of fracture of both nasals. I was enabled to elevate the depressed parts; but there was so much inflammation and swelling that the animal was threatened with suffocation, and the operation of tracheotomy was resorted to.

Treatment.—You will consider the situation of the fracture. If it be on the crown of the arch, and but a little removed from the suture between the nasals, it is over the direction of the superior meatus, and by means of an *elevator*, or curved rod of steel, cautiously introduced into the meatus, the depressed portions may be raised. The tuberculous termination or appendix of the superior turbinated bone may be seen if the nostrils are lifted; a little above it, the entrance of the meatus may be reached and traced through its whole extent, by pursuing a direction close to the roof of the nose, parallel with the septum, and a quarter of an inch from it. If the depressed portions cannot be thus raised, the trephine must be applied a little above or below the fracture, and the elevator introduced through the aperture. If the fracture be in any other part of the bone, it will be impossible to reach it with the elevator, for, with the exception of a very small space, about half way down the nasal bone, and on the suture between the nasal and the superior maxillary, the turbinated bones will be in the way. The trephine must then be resorted to in the first instance.

* Of birds, and they will sometimes be our patients, I will only say, that the bone of the upper mandible represents the superior and anterior maxillaries, the palatine and nasal bones, and that in some cases sutures may be observed pursuing their course almost as regularly as those which divide the corresponding bones in the mammalia. The openings into the nose are found, however, not at the extremity of this bone, but in different situations, according to the species, and the superior surface of the mandible.

Cautions.—It is necessary that the wound, if there is any, should be covered: a compress should be kept on it, not fastened round the jaws with a bandage, for the patient must eat, but attached to the ring of a snaffle below, and to some of the head-gear, as may be most convenient, above. If the fractured parts protrude outwardly, which, however, will rarely occur, they must be replaced, if possible, in their natural situation, or dissected out, or cut off. Perhaps it may be necessary to use considerable force in detaching the loosened bone.

A writer in one of the French periodicals relates a case in which a horse was violently kicked, and there was a contused wound, with a depression of the bone. He applied the trephine, and extracted fifteen splinters. Finding pus in the maxillary sinus, he opened that, and the case terminated well. Here is a specimen of dreadful fracture of the nasal, frontal, and lachrymal bones, with considerable caries. The history of the case I do not know.

Progress.—I will suppose that you have replaced the fractured edges of the bone; reunion has taken place; the external wound has healed; and, except a slight discharge from the nostril, occasionally purulent, the animal appears to be well. Do not be too sanguine. I shall have to speak to you of the structure of the nasal membrane, which is vascular and highly sensible; and of the continual sources of irritation to which it is exposed, and you will then deem it *possible*, at least, that inflammation and ulceration may continue, and at length degenerate into that peculiar form which seems to be, as it were, the natural termination of every injury of the membrane of the nose, and of every chronic disease of the frame. The horse may eventually become glandered, therefore do not be too sanguine. Let your prognosis, even in the most favorable case, be exceedingly guarded.

If, however, you escape glanders, there may be some troublesome sequelæ of the case. Some small portion of the bone may remain depressed, or the membrane may be thickened by inflammation. The nasal passage will then be obstructed, and a difficulty of breathing will ensue in rapid action, very much resembling roaring. Oxena, or the establishment of a stinking ulcer, which will baffle all your attempts to get rid of the fœtor, may follow. Enlargement and suppuration of the submaxillary glands, which sympathise with every affection of the nasal canal, may be produced by the chronic irritability that will occasionally be left. If the fracture has taken place over the lachrymal duct, there probably will be permanent obstruction of that canal, and fistula lachrymalis will succed. You will therefore undertake the case with reluctance, and be well guarded in the opinion you give of the result.

Cases.—There is a case of a horse having received a kick on the upper part of the nose. There was, probably, fracture, but the part was not examined with sufficient care to ascertain its existence. The animal suffered considerably for awhile, and then seemed to get well. Six months afterwards there was evident difficulty of breathing after unusual exertion. The right nostril appeared to be partially obstructed, and on being examined against the sun, a tumour was discovered high up. Six months more were suffered to pass away. The difficulty of breathing was considerably increased; the right nostril was completely obstructed, and at about two inches from the orifice, an elongated bony tumor was perceived growing over the suture of the nasal and superior maxillary bones. The horse was thrown, and so fixed that the nostrial should be dependent, that the blood should not flow into the back of the mouth, which might have suffocated him. The false nostril was slit up as far as the union of the nasal with the anterior maxillary; the lips of the wound were held aside, and by means of a chisel and mallet, the tumour was detached: it weighed ten ounces. The lips of the wound were then brought together; nothing else was done, and in six weeks the horse was well.

There is another singular account of a horse coming within the reach of the sail of a windmill that was working very quickly. The blow fell on the side of the face, and fairly took away the whole of the nasals, leaving the nasal cavity completely exposed. The wound in a manner healed, and he was able to go to work again, and has continued to work for two or three years in this state, the part being merely covered by a piece of leather; and not only is there no glanders, but his health does not appear to be in the least impaired. I regard these cases, however, as exceptions to a general rule, and should always fear the result if much injury had been inflicted on the Schneiderian membrane.

THE GARDENER.

MARYLAND HORTICULTURAL SOCIETY,
Saturday, July 12, 1834.

Mr. Gideon B. Smith presented a fine bunch of the tart Rhubarb, (Rheum undulatum, and R. raponticum,) the leaf stalks measuring 21 inches long, 2¾ in circumference.

Mr. Charles Hammond presented three long green cucumbers, very fine.

Mr. John Malone, Patapsco Neck, exhibited 5 heads of flat Dutch cabbage, the best specimen shown this season, 36 inches in circumference, of solid head, and weighing 14½ lbs. each.

Mr. Henry Hancock presented ½ peck of early June apples, a fine specimen.

Miss Elizabeth Shrœder presented a fine specimen of Magnolia Grandiflora.

Mr. Samuel Feast presented a fine specimen of Gloxina Speciosa with 21 flowers open: also, Ericas, Clarkia pulchella, Dahlias, Fulgida, Feast's King Solomon; roses, gigantea, Charles the 10th, and noisette; Hibiscus sinensis variegata, (variegated chinese hibiscus;) Phlox maculata, &c.

Mr. E. Kurtz presented single and semi-double Arabian Jasmine, thunbergia alata; mesembrianthemum, &c.

Mr. John Feast presented specimens of Russell's geranium, decora Maryana, Lantana cumana and rosea, rosa libertia and elongata; Fnschia cocinea and gracillis; Convolvulus, major and minor; white lychris, double white conterlary bell colua scandens; Dahlia, (Theodore) double sunflower; Myrtus communis; Phlox Maculata; Moranda dydima; Dianthus, Sp.? Hibiscus Molis; Delphinum Chinensis flora pleno, &c.

R. Sinclair's Remarks on the Cultivation of Turnips.—After twenty years experience, I recommend the following practice to cultivate Turnips; which, if carefully followed, may be made a certain, and not an uncertain crop, as is generally asserted. The land suited to this crop ought not to be rich, but of a medium fertility; and pulverized by repeated ploughing and harrowing, until very fine; as near the consistency of pulverized virgin soil of new land as possible; and the turnip crop will very suitably succeed all early spring crops, such as potatoes, peas, radishes, beans, and clover after the first mowing, and will do without manure provided the four first enumerated have been manured in the spring.

Manure.—A small dressing of manure is necessary, say ten ox cart loads to the acre, of ashes or cold manure, such as yard shovelings, &c.; unfermented manures will spoil the crop, by making it run to top, rendering the roots hot and elongated.

Seed and its Preparation.—This is one of the most important parts to be attended to. Without true good seed, all the other labor is lost. Seed gathered from refuse turnips, is too frequently sown; which, if one is suffered to go to seed among twenty good ones, will spoil the whole:—with such seed it would be impossible to raise good turnips.

In order to hasten vegetation, and by that means escape the ravages of the fly, it is best to soak the seed in rain water twenty-four hours, but if wanted sooner, a few minutes in warm water will do. It is strongly recommended to soak the seed in lamp oil, which is said to impart a disagreeable flavor to the seed plant, and saves it from the fly. After soaking the seed it should be rolled in plaster or ashes, to absorb the moisture. For sowing broad cast, I would mix 1½ lb. of seed with a bushel of the mixture to the acre; but those who have Bennett's drill, may sow the naked seed in rows about twelve inches apart, by closing every other slide, which will save much time in hoeing.

Time of Sowing.—In the neighborhood of Baltimore, if the state of the weather will permit the seed to vegetate quick, it will do to sow as late as the 25th of August, for table use; and for stock, it would be well to sow from the 25th of July to the 10th of August; two weeks later will do on the tide water, in Old Virginia. The ground being well prepared, the manure spread when necessary, once ploughing, and then immediately give the ploughed ground one stroke with a harrow; then sow the seed while the ground is damp, and follow with a light hinge harrow, or a brush which will cover the seed to sufficient depth. After this attention, the plants will soon appear; when they are up, should the fly be destructive, roll them with a roller. As it is apt to be dry at this season of the year, it is best to sow a little before or soon after a rain, to get the plants up, otherwise the seed often perishes. Sowing on fresh ploughed ground is of great advantage.

Hoeing, &c.—After the plants are up, and the largest leaf has grown to the size of a cent, run a harrow through them, which breaks the crust, buries the young weeds, and moulds the plants; and from the 1½ lb of seed, if the fly has not been destructive, there will be plenty of plants to admit of the harrow being run each way, which puts the ground in fine order, and cultivates the plants; then commence with the all-important work of hoeing, without which all the preceding work will be nearly lost. Each hand must take about five feet space, and use the hoe actively, and single out the plants as near 12 inches apart as can be done by the eye. This is a tedious operation, but four or five hands actively engaged will soon learn to do the work quick, and get over a large piece of ground in a short time. After it is done, there will be one single plant to each foot of ground, instead of a dozen to the foot in some places and only one to the yard in others, as is the case when the seed is sown thin, and left without hoeing or thinning: in consequence, in one place they will be too thick to grow, and in the other will not grow for want of culture. The large white flat is the best kind for culinary purposes and general crop; and the ruta baga and yellow bullock for late use. Either of these should be sown earlier than the above—the first a month, and the latter two weeks. The white stone and tankard turnips are good kinds, particularly the latter, as it grows to great size, and is fine tasted.

July 7th, 1834.

MISCELLANEOUS.

Honey Bees—Important Suggestion.—A respectable farmer of this neighborhood, called on us a few days since, for the purpose of inviting us to give publicity to a practice adopted by him for preserving Bees through the winter, which he considers as one of great utility and importance to farmers who produce their own honey. Our informant states, that he has kept Bees for a number of years, and after pursuing several expedients for the preservation of Bees through the cold weather, he last fall placed his hive upon a suitable bench in his cellar, which was perfectly dry, and from which all light was excluded. Upon bringing the hives again into the open air, a few days ago, the Bees exhibited an unusual degree of healthiness and activity, and there were but a very small number of dead ones in any of the hives. This experiment is in our informant's opinion, a very successful one, and well worthy the attention of those farmers who engage in this branch of rural economy. It is at least deserving of a repetition.—*West Chester Herald.*

Advantages and Pleasures of Observation.—The observations made during a single voyage across the Atlantic, by a single observer, M. Humboldt on the aspect of the Antarctic regions of the heavens; the peculiar azure of the African sky; the luminous meteors of the atmosphere; the tides; the currents, and the different colors of the ocean, and other phenomena which happened to present themselves to his view; are of more value to the scientific world, than the observations of ten thousands of other beings, who for a series of years have traversed the same regions. Yet these possessed on an average, the same sentient organs, the same intellectual powers, though somewhat differently modified and directed; the same natural capacities for observation as this distinguished philosopher, which only required an impulse to be given in a certain direction, in order to accomplish the same ends.

And was Humboldt more burdened and perplexed, or did he feel less comfortable and happy than his ignorant and grovelling associates, in the ship that wafted them across the ocean? No—he felt emotions of delight and intellectual enjoyments, to which they were utter strangers. While they were lolling on their hammocks, or loitering upon deck, viewing every object with a "brute unconscious gaze," and finding no enjoyment but in a glass of grog,—a train of interesting reflections, having relation to the past, the present, and the future, passed through the mind of the philosopher. He felt those exquisite emotions which arise from a perception of the beautiful and the sublime; he looked forward to the advancement of natural science as the result of his observations, and beheld a display of the wisdom and grandeur of the Almighty, in the diversified scenes through which he passed. Such observations and mental employments as those to which I allude, so far from distracting the mind and unfitting it for the performance of official duties, would tend to prevent that languor and *ennui*, which result from mental inactivity, and would afford a source of intellectual enjoyment amid the uniformity of scene which is frequently presented in the midst of the ocean.—*Dick's Improvement of Society.*

Noble Sentiments.—Lord Erskine was distinguished through life, for independence of principle, for his integrity, and for his scrupulous adherence to truth. He once explained the rule of his conduct, which ought to be generally known and adopted. It ought to be deeply engraven on every heart. He said—"It was the first command and counsel of my youth, always to do what my conscience told me to be a duty, and to leave consequences to God. I shall carry with me the memory, and I trust the practice of this paternal lesson to the grave. I have hitherto followed it, and have no reason to complain that my obedience to it has been ever a temporal sacrifice. I have found it on the contrary, the road to prosperity and wealth, and I shall point it out as such to my children."

There are 164 newspapers printed in the State of New York, of which 66 are in the city. The value of real and personal estate in the several counties is estimated at $416,500,000. The cost of 539 miles of Canals, completed and owned by the State, was $11,500,000. The number of lawyers in the State is 2084; of the clergy, 1840; and of physicians and surgeons 2350. The total banking capital of the State, in 92 banks, is $34,706,460, of which there is subject to the safety fund $16,531,460.—*Amer.*

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Editorial Conundrum—Gardening labor for July—Currant Wine—Humiliating Lesson—Hybrid variety of the Turnip—Change and improvement of Seed—Disposition of Cattle in breeding and feeding, &c.—Anecdote—Youatt's 2d lecture concluded, on the nasal bones of the dog, horse, &c.—Report of the Maryland Horticultural Society—R. Sinclair's remarks on the cultivation of turnips—Honey Bees—Advantages and plearures of observation—Noble sentiments of Lord Erskine—Newspapers, Canals, &c. of New York—Prices Current—Advertisements.

BALTIMORE PRODUCE MARKET.

☞ *These Prices are carefully corrected every* MONDAY.

	PER.	PROM	TO
BRANDY, Apple,	gallon.	$0 27	$—
Peach,	"	75	—
BEANS, white field,	bushel.	2 00	—
BEEF, on the hoof,	100lbs.	5 00	6 25
CORN, yellow,	bushel.	—	64
White,	"	—	64
COTTON, Virginia,	pound.	10	14
North Carolina,	"	11	12½
Upland,	"	11	14
FEATHERS,	pound.	—	37
FLAXSEED,	bushel.	1 00	1 25
FLOUR—Best white wheat family,	barrel.	6 50	7 00
Do. do. baker's	"	5 75	6 25
Do. do. Superfine,	"	5 00	5 25
Super Howard street,	"	5 00	5 25
" " wagon price,	"	4 75	—
City Mills, extra,	"	5 37	5 50
Do.	"	5 12	5 25
Susquehanna,	"	5 25	—
Rye,	"	3 37	—
GRASS SEEDS, red Clover,	bushel.	—	4 50
Timothy (herds of the north)	"	3 50	—
Orchard,	"	3 00	—
Tall meadow Oat,	"	2 50	—
Herds, or red top,	"	1 25	—
HAY, in bulk,	ton.	15 00	16 00
Pressed,	100 lbs	—	90
HEMP, country, dew rotted,	pound.	6	7
" water rotted,	"	7	8
LIME,	bushel.	30	35
MUSTARD SEED, Foreign,	"	4 50	5 00
Domestic,	"	5 00	—
OATS,	"	31	32
OIL, linseed,	gallon.	85	90
Castor	"	1 70	1 80
PEAS, red eye,	bushel.	—	—
Black eye,	"	—	1 00
Lady,	"	—	—
PLASTER PARIS, in the stone,	ton.	3 12	—
Ground,	barrel.	1 37	—
PALMA CHRISTA BEAN,	bushel.	2 00	—
RAGS,	pound.	3	4
RYE,	bushel.	71	—
TOBACCO, crop, common,	100 lbs	3 50	5 00
" brown and red,	"	4 50	6 00
" fine red,	"	6 00	8 00
" wrappery, suitable for segars,	"	6 00	12 00
" yellow and red,	"	8 00	12 00
" yellow,	"	13 00	17 00
" fine yellow,	"	15 00	22 00
Seconds, as in quality,	"	4 00	5 00
" ground leaf,	"	5 00	9 00
Virginia,	"	4 00	—
Rappahannock,	"	3 00	4 00
Kentucky,	"	4 00	8 00
WHEAT, white,	bushel.	1 20	—
Red,	"	1 10	1 15
WHISKEY, 1st pf. in bbls.	gallon.	28	—
" in hhds.	"	26	—
" wagon price,	"	—	—
WAGON FREIGHTS, to Pittsburgh,	100 lbs	1 00	—
To Wheeling,	"	1 25	—
		washed.	*unwash*
WOOL, Prime & Saxon Fleeces,	pound.	50 *to* 60	24 *to* 26
Full Merino,	"	40 50	20 24
Three fourths Merino,	"	33 40	22 24
One half do.	"	28 33	21 22
Common & one fourth Meri.	"	25 28	18 20
Pulled,	"	28 31	18 20

WOOL.

LYMAN REED & CO. Commission Merchants, No. 6 S. Charles street, Baltimore, Md.—devote particular attention to the sale of WOOL. All consignments made them will receive their particular attention, and liberal advances will be made when required. May 9.

SUBSCRIBERS can have their volumes of the AMERICAN FARMER neatly half bound and lettered at this establishment, at 75 cents a volume. Most of the Nos. can also be had at 10 cents each, to complete files.

BALTIMORE PROVISION MARKET.

	PER.	FROM.	TO.
APPLES,	peck.	$0 31	$0 50
BACON, hams,	pound.	10	—
Shoulders,	"	—	9
Middlings,	"	—	9
BUTTER, printed, in lbs. & half lbs.	"	25	—
Roll,	"	11	18
CIDER,	barrel.	—	—
CALVES, three to six weeks old	each.	4 00	8 00
COWS, new milch,	"	15 00	27 00
Dry,	"	9 00	12 00
CORN MEAL, for family use,	100lbs.	1 45	1 50
CHOP RYE,	"	1 56	1 62
EGGS,	dozen.	13	—
FISH, Shad, trimmed		—	—
" salted,	barrel.	6 37	—
Herrings, salted, No. 1 & 2,	"	3 87	—
Mackerel, No. 1, 2 & 3,	"	3 50	6 25
Cod, salted,	cwt.	2 75	3 00
LAMBS, alive,	each.	1 50	2 00
Slaughtered,	quart'r	31	75
LARD,	pound.	8	—
POULTRY, Fowls,	dozen.	—	—
Chickens,	"	—	3 00
Ducks,	"	—	2 75
POTATOES, Irish,	bushel.	—	—
New,	peck.	25	37
VEAL, fore quarters,	pound.	6	—
Hind do.	"	8	—

ADVERTISEMENTS.

IMPROVED DURHAM SHORT HORN BULLS—CHEAP.

I AM requested by a gentleman of high character as an agriculturist, in a neighboring state, to offer for sale several Bulls of his, of which he has yet given me no other description than the following, viz: "My stock is of the Short Horn Durham breed, and derived from the best and purest sources, imported recently." He offers Bulls two years old, one year old, and of the last spring, at the following prices respectively: $200, $150, $100.—If, as I presume from the character of the gentleman, his stock is of a high order, and if he can, as I also presume, furnish pedigrees of pure blood, then is the present a rare opportunity to procure fine Bulls, at more moderate prices than I have hitherto been able to offer them. I will ascertain further particulars in regard to this stock, and be able shortly to speak definitely as to its character. In the mean time, should any gentleman want one or more of these Bulls, he may rely entirely on receiving through this Establishment no other than such as shall be represented and proved too.

Address I. I. HITCHCOCK,
July 15. American Farmer Establishment.

NEW LEICESTER BUCKS.

I AM authorised to sell several fine Bucks of the Leicester or improved Bakewell breed of Sheep, at from $75 to $100 each. Who will have one or more?—
I. I. HITCHCOCK,
July 15. American Farmer Establishment.

UNDERGROUND TURNIP.

THIS turnip is represented as able to resist frost in an extraordinary degree. (See description of it in the first page of this No.) For sale at the American Farmer Establishment. Price $1 per pound. jy 8

GRAY OR GAZE HOUNDS.

LAST September, I received from the President of the United States, for the breeding farm of this Establishment, a pair of these very beautiful and powerful animals, which had been sent out to him from Holland, by the American Consul there, and in vol. 15, of the American Farmer, page 233, I published the letter accompanying the very acceptable present. I have now the satisfaction to offer for sale four (female) puppies—their issue. They will be ready for delivery in all the month of July. Price $20 each.
I. I. HITCHCOCK,
American Farmer Establishment.

TURNIP SPINACH & CABBAGE SEED.

A FULL supply of these seeds of several of the best varieties for summer and fall sowing, now on hand and for sale by I. I. HITCHCOCK,
july 1 Amer. Farm. Estab.

DALE'S NEW HYBRID TURNIP.

THE subscriber now offers to the agriculturists a new and decidedly superior variety of Turnip, originated by R. Dale, esq. an intelligent farmer, near Edinburgh, Scotland; it was obtained by unwearied attention in crossing the Swedish or Ruta Baga Turnip; it is superior in size and flavor to the Ruta Baga; is closer and finer in the texture; it is rapid in its growth as the White Flat Turnip. In fact, it includes the great desideratum in the selection of a proper variety of the Turnip which is to obtain the greatest possible weight at a given expense of manure. This variety seems to be more adapted to this end than any other sort introduced; it will be found superior in quality to any of the White Field Turnips, and keeps longer than any of them, and very near as long as the Ruta Baga—the color is yellow—the shape oblong. Price 25 cents per ounce. The season for sowing is at hand. I. I. HITCHCOCK
10 June Amer. Farm. Estab.

THE 7-8 SHORT HORN DURHAM BULL "DUKE" IS FOR SALE.

DUKE is 2 years old, red and white, by Parson, dam Isabella; Parson is by Bishop, dam, Moss Rose, (imported in 1821, bred by Mr. Ashcroft,) got by Phenomenon—Isabella is by the celebrated imported bull Lothario, dam, Meg, by Billy Austin. Duke is of uncommon fine size and figure, pronounced by judges to have every point and appearance of a full bred. Price (to suit the times) $150.

Also—Several 3-4 blood HEIFERS, with their first calves, will be disposed of at $100 each. Application to be made (post paid) to I. I. HITCHCOCK,
May 30 American Farmer Establishment.

DEVON CATTLE.

THE subscriber has the selling of a considerable number and variety of these valuable cattle at prices *unusually low*, viz: Bulls from 75 to $100; Cows and Heifers from 60 to $80, and Calves, one year old and less, from 40 to $60. More particular information may be had by application to I. I. HITCHCOCK,
May 9. American Farmer Establishment.

BUCKWHEAT.

THIS article is very scarce and high in price in our market this summer. I have however obtained a small quantity for seed, which I offer to my customers at $1 50 per bushel. I. I. HITCHCOCK,
June 17. American Farmer Establishment.

CUBA TOBACCO SEED.

JUST received from Matanzas, a few ounces of the true Cuba Tobacco Seed, from *la Vuelta Abajo*, warranted in prime order—Price $1.00 per ounce.
I. I. HITCHCOCK.

GAMA GRASS SEED.

A SMALL quantity just received, and for sale at 50 cents per ounce, by
I. I. HITCHCOCK.

TERMS OF THIS PAPER.

1. Price five dollars per annum, payable in advance. ☞When this is done, 50 cents worth of any kind of seeds on hand will be delivered or sent to the order of the subscriber with his receipt.

2. The *manner* of payment which is preferable to any other for distant subscribers, is by check or draft on some responsible party here, or else by remittance of a current bank note; and to obviate all objection to mail transmission, *the conductor assumes the risk.*

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☞ADVERTISEMENTS relating to any of the subjects of this paper will be inserted once at one dollar per square, or at that rate for more than a square, and at half that rate for each repetition.

THE FARMER & GARDENER;

AND LIVE-STOCK BREEDER & MANAGER.

CONDUCTED BY I. IRVINE HITCHCOCK, AND ISSUED EVERY TUESDAY FROM THE AMERICAN FARMER ESTABLISHMENT, AT $5 PER ANNUM, IN ADVANCE.

No. 12. **BALTIMORE, JULY 22, 1834.** **Vol. I.**

☞This publication is the *successor* of the late

AMERICAN FARMER,

(which is discontinued,) and is published at the same office, at five dollars per year, payable in advance.

☞When this is done, 50 cents worth of any kind of seeds on hand will be delivered or sent to the order of the subscriber with his receipt.

American Farmer Establishment.

BALTIMORE: TUESDAY, JULY 22, 1834.

The object of "A Farmer"* appears to be a very feasable one, and we should be much pleased to see it carried into operation. The subject of Education is one of the first consequence to all classes, and in all occupations; but in none more needed than an education adapted to agricultural pursuits. We have our schools for Physic, Law, Divinity, and even War has been thought worthy of a separate endowment by legislative provisions, while Agriculture, on which all other professions and occupations depend, is left without fostering aid.

It has often been presented to our mind that school museums would be a most admirable mode of communicating intelligence to the young mind, on many subjects of the first importance, *now*, not thought of being embraced in our course of school education. How easy a matter it would be in this way, to present to every pupil in the country, specimens of every thing in Geology, Mineralogy and Botany, which our extended country contains; and being presented to the eye, and familiarized to the pupil from his youth, he would never be sensible of the labour of acquiring this information, which now falls only to the lot of a Wilson, a Nuttall, or an Audubon, and that, after years of toil and travel, at the hazard of their lives and the destruction of their bodily constitution.

How many articles are we ignorantly treading under our feet, for which our vessels are ransacking the four corners of the world, at the expense of much treasure and the destruction of many lives? We wish "A Farmer" success in his undertaking—we wish we had many more such farmers.

AGRICULTURAL REPORT.

The accounts which have reached us, generally report in favour of a good crop of wheat. In some few places it is said to have been injured by the wet weather where the ground was low and not well drained, but the grain is said to be well filled and heavy.

The prospect for the fall crop of corn is becoming more flattering—the dry hot weather is now very favorable for corn. If the ground has been well tilled and kept stirring and clear of weeds and grass, so as to make the roots strike deep into the ground, and, if these roots find there, any food to subsist upon, we may expect the country will be blessed with great abundance. The average wheat crop for all Frederick county is by late accounts laid at 20 to 22 bushels per acre. The agricultural reports from different parts of France are extremely favourable—the rains which succeeded the drought in the early part of the spring have made a very great improvement, and the vineyards and corn lands both promise a very abundant harvest.

It is to be remarked that at the time *we* had cold wet weather in the early part of the spring, *they* had the reverse in France.

WOOL.—We insert an extract from the Northampton Courier, addressed to their wool-growing friends—we know not of what value the information may be to that class of our friends—but as the season for active operations in that article is approaching, we insert the clause for their consideration. The demand has been very limited the last week, and prices have remained stationary. It is expected that more activity will soon take place in this business, when it will be for the holders of wool to consider the intelligence given by the Berkshire wool-grower, and to attach such weight to his communication as it may be deemed worthy of receiving.

"If our wool-growing friends have a fair price offered for the new clip, instead of unwisely holding on, expecting better ones, we would say by all means sell it. A letter from an experienced wool-grower in Berkshire, says that large quantities of foreign wool are in the market; a great amount of the domestic article has been forced off by men who wanted the avails; that many manufactories have stopped, and others have curtailed business; and that no good reasons now exist for believing that wool will rise in value, rather than diminish, this fall. The dissolution of Congress without doing any thing to settle the currency, or the political affairs of the country, is almost indubitable evidence of all this."

MARYLAND HORTICULTURAL SOCIETY.

Mr. I. I. Hitchcock presented specimens of the apple tomatoe.

Mr. Waters presented ripe fruit of the paradise apple.

Dr. Monkur presented ripe fruit of the paradise apple.

Mrs. Dr. Buckler exhibited a fine specimen of the agapanthus umbelatus.

Miss Eliza Schrœder exhibited a fine specimen of tigrida pavonia, and double pomegranite.

Mr. Samuel Feast exhibited a fine specimen of gloxinia alba; ixora coccinia, rosa microphylla, 3 species of heath; kitabelia vitifolia; two varieties of lilies, &c.

Mr. John Feast exhibited specimens of agapanthus umbelatus; lilium tigrinum; rudbeckia purpurea; ferraria tygrida, lagerstremia indica; lantana rosea; malva alba; silphiam perfoliatum; dahlias, lady grantham, Forster's constantia, and morning star, all very fine.

Mr. Edward Kurtz exhibited specimens of myrtus tomentosa, jasminum sambac pleno; phlox pyramidalis alba; plumbago capensis, &c.

LINNÆN BOTANIC GARDEN,
Flushing, *July* 12, 1834.

To the Editor of the Farmer & Gardener:

There is without doubt great room for improvement in objects of Agricultural interest, and parcularly in regard to grasses and grain. Even a transient glance at the agricultural publications of Europe will furnish convictive proof to the most incredulous on this subject. It is not the purpose of the present letter to enter into a detail of the species and their qualities, as those persons who desire to investigate them can consult Loudon's Encyclopedia of Agriculture, Sinclair on Grasses, and other publications of merit. The object of this letter is merely to state that we will import from Europe for all who desire them, the seeds of any grasses, grain, or other Agricultural, or Horticultural productions, and any orders for these articles ought to be transmitted to us speedily, so that there may be no disappointment. On receiving a list of the articles desired we will state the probable cost thereof.

Yours, respectfully,
WM. PRINCE & SONS.

A woman and two daughters died almost instantaneously in France, on drinking from a barrel of cider a year old, in which a dead serpent was found. The reptile had probably crept in the bunghole left open for the liquor to ferment.

NOT BAD.—"Have you any thing over today?" said a needy friend to a certain editor. "Yes," said he, "I have a note that lays over, and I will thank you to take it up."

* See page 91.

THE FARMER.

Cultivation of the Perottet Morus Multicaulis.—In our former numbers we have given an account of the invention of machinery for manufacturing silk, which will give this branch of business a permanency in our country, and cause it to rival in importance that of wool, cotton, or any other manufactory in our country. We have likewise given a history of the introduction of the Perottet Morus Multicaulis into Europe, and into our country; and contrary to the doubts at first entertained of its being adapted to our climate, it is there shown that it will adapt itself to the extremes of heat and cold between the Senegal and the St. Lawrence. It is found to grow most luxuriantly in a light, sandy, rich and moist soil; and in such a situation, the leaves not unfrequently grow to the size of 12 by 15 inches. They are found to be of a very fine texture, and to afford more nutrition for the worm than an equal weight of leaves of the white mulberry. The size to which this tree will eventually arrive in this country, is not yet ascertained; but it is probable, it will not be found to grow large enough for an ornamental tree, for the purpose of shade.

Cultivation.—This tree may be cultivated from the seed; but it is not advisable to make use of that method, where the cuttings or layers can be obtained; as it will not reach from the seed, that size and perfection in four years, which will be attained in the second year, from cuttings or layers.

We have this tree growing on the experimental farm connected with the Farmer Establishment, in great luxuriance. The layers were put down in beds, on the 2d day of April last, and on the 21st day of May, being 48 days from the laying down the cuttings, the young shoots measured from 8 to 24 inches high, and some of the leaves were measured, being 6½ inches wide by 8 inches long. At that time the young plants were taken from the beds, and transplanted into the nursery, at about the distance of eighteen inches by two feet apart, where they will be permitted to stand until next November, or until the next spring, at which time they will be ready to be delivered to customers.

These plants, without further trouble than that of placing the layers in the beds, have thus in 48 days attained a state of forwardness and size, which the white mulberry, from the seed, would not have arrived at before the end of the second year, and at the expense of two year's cultivation. The seed of this tree has been produced, in one instance, in Baltimore, and in other places at the north, and in France. That renders it probable that when the trees have obtained greater age there will be no difficulty in procuring seed to be conveyed to a distance by mail, where no other opportunity of conveyance can be had without much difficulty; but in all other cases, there can be no doubt but the cuttings of the Multicaulis will be greatly to be preferred to the white mulberry, or to the seed of either kind.

The business of making silk will be advanced two years by making use of the layers of the Morus Multicaulis. The plants we now have on hand, if transplanted next November, to any place south of this, where the winter is mild, and the roots protected from the cold by throwing some litter round them, they will vegetate early in the spring, and the process of feeding the worms in numbers sufficient to obtain eggs for another year, may commence at once—whereas, with the white mulberry, it would not be advisable to begin pulling the leaves until the third or fourth year after sowing the seed. One reason why the feeding of the worm may commence so early with this tree is, that in a very short time the leaf arrives at a state of perfection, turns yellow, and if not pulled will drop off; and therefore, as soon as the leaf has arrived at a certain state of maturity, and other young shoots have been produced, the older leaves may be pulled without injury to the tree, and a succession of shoots are thus produced through the season that will enable the proprietor to continue the operation of feeding the worm through the greater part of the summer season. Though the leaves will grow in greater luxuriance in a moist and rich soil, yet we are by no means authorised to draw the conclusion that such will make silk of a better quality; nor are we certain that such luxuriance will be found to favor a greater production of silk to the acre. What grazier does not know that a ton of clover or spear-grass hay, where one half ton has been produced to the acre, is much more nutritious than that where three tons to the acre have been produced? This fact is perfectly familiar to the observing farmer, and in reasoning from analogy we may rationally draw the conclusion that like results will be produced in this case, and that moderately rich land will be found most propitious to the cultivation of good silk and of large crops.

When the plants are about to be placed in the field where they are finally to stand, various methods may be adopted, according to the views of the cultivator and the circumstances of the ground. We will consider what we conceive would be a proper mode of proceeding with one of the old cast off fields which so often mar the prospect in our country, and which have been no otherwise useful for half a century than to form a continuity of space.

The first thing to be done will be to enclose the ground with a good substantial fence, for without this precaution, the young trees will be kept down by all kinds of stock that can approach them. The extreme luxuriance of their growth, and the saccharine and nutritious quality of the leaf and young twigs, is peculiarly enticing to stock of all kinds, and it is very probable, that there could not be put into the ground an article, that would afford more nutritious food for animals. This will render it incumbent for the cultivator to be on his guard for the protection of his young trees. When the field is enclosed, if the soil be light and dry, let there be one bushel of plaster of paris sown to the acre, and the ground ploughed deep, say from 9 to 11 inches, and left flat; on the contrary, if the land be stiff clay, and wet, let it be thrown into ridges of from 12 to 16 feet wide, and a water furrow kept open for draining the land. Let the cultivator ever bear in mind, that this tree succeeds best in dry soil, and if his is not so by nature, it should be made so by art.

When the ground is thus prepared it will be for the cultivator to determine what plan he will pursue; and he will probably be influenced by the quantity of ground he intends to occupy for this object. If he is only trying a small experiment, he will be induced to plant out the standards closer together; if on the contrary his intention is, as we hope soon to see many so engaged, to make a mulberry plantation on their old commons, he will, in order to save present expense, place the young trees further apart, and suffer them to fill up the intervening space from young scions sent out from the roots—one tree to the square rod, or 16½ feet each way, would be a suitable distance in this case.

If the ground selected be the poor soil of which we have spoken, let a hole be dug of two and an half or three feet diameter, and 18 inches deep—fill the hole two thirds full of rich mould, or light manure—then place in the tree with the roots extended, fill up the remainder of the hole, and tread the dirt lightly round the roots.

It has been found in New Jersey, that marl is one of the best manures for trees—where this abounds, as it does on most of the tide waters of the Chesapeake, there can be no difficulty in cultivating this tree on the poorest soils. Leaves from the woods raked into heaps in the fall of the year,

soon after they have fallen from the trees, and covered with the earth taken from the surface of the soil, making alternate layers of leaves and of soil, and if a portion of shell marl were added, nothing would be better fitted for the young roots of this tree to shoot into, and produce young scions; which from year to year, may be thinned out, when too thick, and used to extend the plantation.

The interstices between the rows of trees should be cultivated, with some crop of low growth, such as potatoes, ruta baga, mangel wurtzel, &c. &c. and the ground manured, so as to take from the young mulberry orchard the expense of cultivation; the profits of the crop raised in this way would be sufficient to repay the expenses of cultivation, manure, &c.

(To be Continued.)

COUNTY MUSEUMS.

To the Editor of the Farmer & Gardener:

Specimens of nature and of art, collected in cabinets, or museums, in the towns and villages through our country, would evidently be sources of much instruction and much entertainment to nearly every class of the community. Representing, as they would, both the riches and the beauty of the mineral, vegetable and animal kingdoms, in one case as fresh from the hand of nature, and in another as modified by art, the philosopher could resort to them, as to rich fountains of instruction; the teacher also could lead his pupils there, to explain to them lessons they had conned over in their books. The farmer would find many things to encourage and strengthen his efforts in his laborious but honorable employment. He might discover some substance which he could add to his list of manures; some plant which would furnish to him a new object of attention, and an increased reward for his labors. He might see a specimen of some insect which he had before known only as a formidable enemy, and at the same place discover some weapon or mode by which he might destroy or avoid it.

The social circle also might resort to a cabinet of nature and of art; not indeed, at their first entrance, to have their eyes dazzled with rows of decanters sparkling with brandy or looking pale with gin or florid with wine, or to be presented with pitchers and tumblers as appropriate apparatus for trying experiments upon their power; but they might, on one shelf observe clusters of crystals as beautiful and as rich as the hand of nature could make them; on another they might examine the precious ones, which quickens the energy and perfects the skill of the mechanic in constructing the beautiful fabrics and multiplied luxuries with which he supplies our markets, and enriches our tables. They might also see specimens to show the power of the pencil and of the chisel, when directed by the hand of an accomplished artist. Circles of ladies and gentlemen, might, by resorting thither find a rich intellectual and social repast while there, and furnish themselves with materials for a continued entertainment for days and weeks after they had withdrawn.

To what more entertaining or useful resort could parents lead their children, than to a collection of specimens, which show how richly they are supplied with materials, both for sustenance, and instruction, exhibited in all the beautiful variety in which they are presented from the hand of their Creator.

Who is there, what man, woman or child can be found, who would not receive, both instruction and entertainment, by occasional resorts to museums of nature and of art?

As all will grant, and many feel, and feel sensibly, the importance of having cabinets, or museums, collected, not in one or a few places, but in all our towns, villages and neighborhoods, the interesting question is, how can they be provided? To answer that question, Mr. Editor, is the object of this communication, which is as follows:

1. On the first Wednesday of November next, let the friends of education and of general improvement in each of the eleven hundred counties in the U. States, meet at their county town, taking with them any specimens, either of nature or of art, which they may deem curious or useful.

2. Any person or persons at the meetings able and disposed to explain a part or the whole of the specimens presented, might do it for the benefit of all concerned, at the same time as far as practicable furnishing names and labels for the different kinds of specimens.

3. Such specimens as the owners wished to retain, would be for private use, after being exhibited, and perhaps named; the remainder deposited as the BEGINNERY of county museums.

4. Have forwarded to the Post Master of each county town, some plan for organization of county Lyceums, with provisions for quarterly meetings, to increase their collections, and to extend their operations. Provide also by some society or public spirited individuals, a sufficient number of Thomas S. Grimkie's address to S. Carolina, on the Lyceum system, to furnish each convention with a copy, to be sent to the Post Master as above.

5. Invite School Lyceums, some of which have already numerous collections, aided by other societies and individuals, to send to such places of county meetings as might be found practicable, such specimens, both of nature and of art, especially of their own improvement in penmanship, map drawing, needle-work, mechanism, &c. as they could spare for the use of said conventions and museums.

6. Let the Curators of each County Lyceum, forward to New York in time for the annual meeting of the National Lyceum, held on the first week of May, any specimens they might find practicable and expedient either for exhibition or for exchange and distribution through the union.

7. Let the plan already adopted by many School Lyceums in several of the states, of corresponding and exchanging specimens, greatly to their intellectual and *moral* improvement, be used as an example by schools generally throughout the union.

8. Let school committees and parents encourage and aid teachers and pupils, in attending the quarterly meetings of County Lyceums, and in forming societies and collecting specimens in their own neighborhoods and schools, and even in families, as examples of the last already exist in considerable numbers.

Note.—As all, or nearly all the steps above prepared, have already been taken in many counties, and in some of the smallest, it will be difficult perhaps to assign a reason why they may not be taken in each of the eleven hundred counties in our Republic. As the results of these steps, wherever and whenever taken, have been in the highest degree satisfactory and useful, it will be as difficult to assign a reason why they *should* not be taken, for the benefit both of individuals and of our nation; of the present and future generations.

A FARMER.

[From the Gardener's Magazine.]

ON THE MANAGEMENT OF THE VINERY.

In order to prevent the fruit from suffering from the effects of damp (an evil so often complained of in vineries,) the young wood should always be kept thin, by taking the tops from the shoots, three or four joints above the fruit; and not allowing them to ramble through the house, shading the fruit from the sun, and preventing the free circulation of air among the branches and berries. For the same reason, the lateral shoots, which push from the young wood, should be cut or pinched off at the first or second joint, so as not to endanger the bursting of the bud on the main shoot.

It is well known, that every place from which the sun and air are partially excluded is sure to be damp: the walls of a house, for instance, which are covered with ivy, if it is not in a very dry situation, will be found wet and uncomfortable in the inside.* When this is considered, it will appear evident, that upon the same principle, the vinery in which the wood is not properly thinned must suffer in the same manner, though in a less degree. Particular attention should be given to the thinning of the fruit; taking out most berries in the heart of the bunch; leaving those towards the extremities; and making the whole very thin. Those kinds of grapes the bunches of which are of a branchy nature, such as the black Hamburgh, the Syrian or white Nice, &c. should always be stretched out a little, and tied up with a small piece of matting, that they may have room to swell, and be kept from crowding each other. This is not only a means of preserving the bunches from damp, but also of having better swelled and finer-flavoured berries. It is a common practice with those who have fruit in their vineries, when the season is far advanced, to keep up the temper-

*Ivy, when not fully grown, may be liable to the objections of our correspondent; but when it has grown a sufficient time to clothe the face of a wall with its foliage, no covering whatever can more completely protect it from moisture. Our correspondent's objections apply with their full force to deciduous plants of every kind trained against the walls of houses; and both deciduous plants and evergreens afford protection and breeding-places for many kinds of insects, slugs, &c. We have known snails and earwigs infest bedrooms two and three stories from the ground, in houses, the walls of which were covered externally with ivy. For this reason, we would never have any description of plant, either deciduous or evergreen, trained on a cottage close to the windows. On walls wholly without windows, or architectural ornaments of any kind, ivy will form a valuable protection from rain, and also a nonconductor of heat, either from without or within.—*Cond.*

ature of the house, throughout the night, with artificial heat, and to let their fires go nearly out when the morning dawns. I do not, however, approve altogether of this plan.

Let any person go into a vinery in the morning, before it is aired, and when the sun is shining upon it, he will feel the atmosphere moist; and, on examining the fruit, will perceive that it is covered with dew. Now, if this moisture be allowed to remain for any length of time, it certainly must prove injurious; and to remedy the evil seems to be an object worth attention.

A very small degree of artificial heat will be found sufficient throughout the night; but, as soon as the sun arises in the morning, and shines upon the house, by increasing the temperature, and giving a sufficient quantity of air, the moisture will be expelled, and the atmosphere of the house will become dry. It may not be unnecessary to remark, that the fruit should be often examined; and if there are any of the berries on which the damp has taken effect, they should be carefully picked off; as, if they are suffered to remain, the damp will soon spread over the whole bunch. A GARDENER.

Mid-Lothian, Sept. 18, 1833.

HOW TO OCCUPY AN ACRE OF LAND.

Plant potatoes on one half and wheat on the other; the potatoe land is left in excellent condition for wheat the following year, reserving a small part for onions, cabbage, lettuce, &c. alternately. The produce on an average would be as follows: Between four and five coombs (of five bushels each) of wheat, with little for his pigs; holm (stubble) would furnish him with fuel to heat his oven; 150 bushels of potatoes besides other vegetables, which after using as many potatoes as may be wanted for his family, with his bran and a small quantity of corn, would fatten him three or four hogs in the year; and thus, as he would live more on animal food and vegetables, he would not consume half the quantity of flour, which constitutes nine-tenths of his subsistence. If he were to pursue this plan, the greater part of his crop would be consumed upon his land, which would continue to improve. His rent would be always ready, and he would be able to give more for his land than any farmer in the country. Take a view of him after his day's work; see him employed in his garden; his wife assisting; one of his children weeding, another employed in carrying the refuse to the pigs, a little one prattling beside the father, till the dusk of evening calls them to their repose. Rudely as I have drawn it, to me this picture seems delightful and all this might be effected to the benefit of the landlord, as well as that of the community at large.—*British Farmer's Magazine.*

AN OLD SAILOR.—The Salem (Mass.) Observer, speaks of a respectable ship master, now a resident in that town, who has spent at sea forty-four of the fifty-five years of his life. He has been in all climates, exposed to all examples, temptations and persuasions, on board of privateers, and in all situations incident to a sea-faring life, yet he has never, at any time, wet his lips with ardent spirits, or tasted so much as a glass of wine. His health has been perfect and unvarying, in all exposures and changes of climate.

THE BREEDER & MANAGER.

[From Dixon's Live Stock Manager.]

Milk.—This is another property which should not by any means be lost sight of by a breeding farmer, as it supplies in large proportions a product very useful to all families. The question of the propriety of having a distinct breed exclusively for this purpose, or only partly calculated for this use, and partly for that of the butcher, has not yet been fully decided; but if such cows as have much propensity to fatten, seldom answer the purpose of the dairy, it would seem that there ought to be a breed almost exclusively for the pail. It has, however, been suggested as probable, that by great attention, a breed might be reared, the males of which should in every respect, be well calculated for the shambles, and the females when young, produce abundant quantities of good milk; and when they reach a certain age, be easily fattened. Such a breed would, it is supposed, be of the greatest value of any that could be produced: and some of the best English and Scotch breeds, are believed to have nearly attained this point of perfection.

There can be no doubt, that those coarse, more open fleshed, ill-formed cows which have the least disposition to fatten, often give the largest quantities of milk; but the more fine fleshed, better formed sorts which are more particularly disposed to take on flesh, give that which is of a better quality and of a higher and richer flavor, at the same time they are more productive in other respects. They are, therefore, in some situations, and for some purposes, to be greatly preferred as consuming a much less quantity of food, and for other reasons.

It is by no means improbable that a cow-stock might be produced, which should unite the qualities of affording a large quantity of good milk, with a disposition to fatten in a ready manner. For this purpose, it would be necessary to select such young cows for breeding from, as have most of the marks of being well suited for fattening in the formation of their different parts; whilst at the same time a nice and exact attention should be paid in the selection, to the necessary properties of a good milker. The cows should possess peculiar favorableness of form and quality in the udder, and parts connected with it, such as a proper degree of roundness in the former, with considerable fulness or show in their fore-parts; and squareness in the standing of their teats, and a largeness and fulness of what are termed the milk veins. The young bulls to be selected for this purpose, should be such as have been raised from cows properly formed and disposed for fattening. By correctly attending to these and some other circumstances and points, in time a breed of most excellent feeding and milking cows would in all probability be raised; which would be of vast advantage to cow keepers of all kinds, as well as to the public in general; as from the present race of milk-cows wanting the form and disposition for fattening, there is a very great loss, especially to the milk dealers in the metropolis and other places, in parting with them, as well as a deficiency of meat for the supply of the public by their not becoming properly fat. The breeder should therefore be careful and attentive to direct his views more particularly to this matter than has hitherto been the case, as a great deal more is, perhaps, capable of being accomplished in this way, than has yet in general been attempted.

In the "Remarks on the Improvement of Cattle," the common notion of a great inclination for feeding being incompatible with good qualities for milking, is ably controverted. It is contended, that inclination and effect, are very different matters; that the former may exist, when the latter is, in the whole or part, overcome by some other counteracting cause; and that when the effect of such preventing cause can be removed, the original tendency may be fully effective. It is argued, "that if it were *assumed*, that a cow while giving a great quantity of milk could not possibly keep herself in good condition; because so great a portion of the food being converted into milk, the carcase could not be properly supported; still "it would be a rash conclusion, to infer from hence, that the same animal could not have a great tendency to get fat; and that when dried of her milk, this tendency might not soon produce its corresponding effect: for the effect of the milking quality having then ceased, the other cause, namely, the tendency to feeding, would remain unopposed in *its effects*, and be wholly operative." But such a position should never have been assumed, it is further argued, for, "as well might it have been contended by those who had only a bad race of hard-fleshed animals that there were therefore no other kind, that would produce a much greater quantity of beef from a given quantity of food."

But to proceed on the ground of fact and experience, it is observed, that "some animals have the power of obtaining a greater degree of nourishment from a given quantity of food, than others of an inferior description: and therefore, though some of the former may give a larger quantity of milk than the latter; yet their carcases also may, at the same time, be better supported." The author of the above-mentioned "*Remarks*" states, that he has "frequently found cows that are great milkers, to keep themselves at the same time in high condition, to feed with the quickest despatch when dried of their milk, and whose descendants will arrive at the earliest maturity: a practical proof, he observes, that a great tendency to feeding *is not* incompatible with a great tendency to milking;" and adds "that he has many such cows in his own possession."

After suspecting that this controversy had its origin, where only one property could be obtained, and that of early feeding being preferred to great milking, he remarks, "if both can be combined, and that they can," there is the conviction of experience; those breeds which possess only one of them, will not be thought of very highly. "For who, it is asked, that is conversant with such things, does not know the great difference between the value of the produce of two cows, the one a good, and the other a bad milker, if that produce be taken for one year only?"

When "the skill, the perseverance, and the capital required to improve a breed in the carcase only, is taken into consideration, it is not surprising that so few have attempted it;" and when it

is further considered, "that the union of great milking with quickness of feeding, required a two-fold labor, we might almost wonder it has been undertaken at all." Yet, whatever difficulties there may be in the business, they are to be overcome, by not neglecting any essential property that may be necessary to the animals that are bred. This was found perfectly practicable, "by selecting those animals that were the most perfect in point of form, in quality of flesh, and so on; and again, by selecting out of those the very best milkers," using in other respects the same care as already noticed. This mode of proceeding in the business is said to considerably increase "the expense in the first instance; but the advantages afterwards derived, are more than a sufficient compensation, as the property of milking is inherited as readily as that of peculiarity of shape."

In what regards "the value of different breeds as milkers only;" some have attended solely to the quantity of milk given by each cow, while others have had regard only to the quality. But it is certain that this value must depend on the quantity and quality jointly yielded from a given quantity of food. By the last of which "is to be understood, not merely the same weight; but the same weight of the same kind and quality also;" and in any trial it should further "be given under similar circumstances." The length of time set apart for any attempt of such a kind, too, should, it is conceived, "be at least a whole year: because some breeds will give a great quantity of milk just after calving, but will not yield that quantity for any considerable time, while others will not give so great a quantity at first, but approximate to it much longer." The number of cows need not be the same, "in two or more cases of trial; but the proper number for the consumption of the proposed quantity of food. For the question is not, whether the produce of so many of one breed, be more valuable than the produce of the same number of any other; but what will be the value of the produce, afforded by a certain quantity of food, when bestowed on the one, compared with the value of the produce afforded by the same quantity of the same kind of food when bestowed on any other; remaining circumstances being as similar as possible."

It is further noticed, too, that "in comparing the value of any breed with the value of any other, in reference to the shambles, it is very evident, that the placing out certain quantities of different kinds of feed, and comparing the increase of weight in each case with the quantity of food consumed, will never determine the question. because, here, it is said, the question is not, which have paid the best for a certain period; but which have paid the best during the whole course of their lives; the different breeds being killed at that particular age which will give them respectively the *maximum* of profit." It is, further, a circumstance well known to every practical man "that there is a certain age which is the most profitable for disposing of one kind; but another age and far different, the most profitable for disposing of another;" and that "some breeds cannot easily be made fat till they are three or four years old; while others are capable of being so at any age we may think proper." It is believed that "the most profitable age for disposing of fat cattle of the improved short-horned breed, is from two to three years old, according to circumstances at the time of sale." In all trials of this sort, it must be remembered, "there are many and great difficulties to encounter in order to render the comparison just; we may, however, proceed with a sufficient degree of accuracy, to determine what breeds are unquestionably the best; and the greater excellence has always been yielded to those which arrive at the earliest maturity."

Such are the conclusions of this very intelligent breeder on these various interesting points, and we recommend them as highly deserving the attention of those engaged in the breeding of animals, as their value rests on real practical grounds.

Aptitude for Labor.—This is a quality, that in certain circumstances, may be necessary to be considered in the breeding of Cattle Stock. "The question of the advantage that may be gained in this practice, in regard to the increase in the quantity of meat is, it has been observed, "far from having been decided; nor has it been well explained whether injury has not been done in restricting the growth of the animals by this means, more than can be compensated by their labor. It is obvious, however, that when cattle are worked they must be longer in being fitted for the market. But as, from the supposed greater cheapness of rearing and keeping neat cattle than horses, and from some other causes, it may sometimes be necessary to make use of cattle for the purpose of labor, a breed well calculated in this respect must be considerable in particular situations."

Such a breed is most probably to be met with in the fine, clean, active-formed varieties of the North Devon cattle, though some other sorts answer well for this purpose. Power, tractableness, activity, and speed, are the great requisite in stock for this use; for which cattle are usually begun to be trained from the age of two to three years, constantly working them in such a manner as not to injure their growth or value. But circumstances will be more fully considered and explained hereafter, in speaking of the ox, and other beasts of labor.

Blood, Lineage, or Descent.—These terms are used in the language of the art, and are adopted in analogy to the system of breeding in the race-horse, and, imply the quality of the breed, which is very necessary for the farmer praticularly to consider in the improvement of his live stock. The term, *blood*, is employed to signify the natural, fixed, and inherent properties of a breed, or kind, as exemplified in their external appearances. Its utility for the purposes of the breeder is, therefore, to enable him to discriminate, with greater nicety and correctness, in his selection of such animals, as are the most adapted to the improvements he has in contemplation.

The descent or lineage of animals is consequently a matter of the utmost importance in point of breeding, which is much better ascertained by the colour than the shapes of them. The same intelligent breeder, from whose remarks we have already selected so much valuable information, observes that, "suppose a number of pure Devon cows to be crossed with a breed of perfectly white bulls; in that case, it is thought probable, that some of the calves would be perfectly red, others white, and that the greater part would partake of these colours jointly. If we were then to take the red heifers produced by the cross, and put them to a Devon bull, it would not," he continues, "be a matter of any great surprise, if some of their progeny, though sprung from red parents, should be perfectly white, and still less, that several should be mixed with this color; though it would not by any means be so probable as in the former instance. And were we thus to proceed through several generations, this white colour would be less and less apparent in the breed, but would most probably occasionally show itself in some individual or other."

While, on the contrary, "were we to breed from pure devons only, that is, from those that have been carefully bred for a great length of time, we should reasonably expect their offspring to be of the same color with the parents themselves; while any deviation from this would be looked upon as one of those changes, which nature sometimes produces out of the common course of things. And what is thus stated is equally applicable," he remarks, "to peculiarity of form, or quantity of flesh."

In continuing the perfection attained by any breed, particular attention is necessary to this as well as other means; for it is observed, that "though animals that are themselves good, and have also been descended from a long race of valuable progenitors, are by no means likely to produce, even in a single instance, a bad offspring; yet it will be no more contended, that every animal produced by the same parents is precisely of the same value, than that the red colour in the Devon cattle is precisely of the same shade in each individual, or that the horns of the Lancashire are exactly of the same length." As "there is a *strong* tendency for *like to produce like*, both in the animal and vegetable kingdoms, so also there is a *slight* tendency to change; and nature *sometimes* deviating from her common course, produces an alteration which continues to be propagated. And hence will very clearly follow the impropriety of keeping a bad animal on pretence that it is well descended; an error which some breeders have, it is said, fallen into, if not in judgment, at least in practice." Hence too, "it will appear, that this defective kind of animal spoken of, is generally produced from some mixture of impure blood, or that the breed has been declining through several generations; in either of which cases, it can never be said to be well descended. For, in order that an animal may be well bred, it is not sufficient that we are able to trace it to parents the most perfect of their kind, but every intermediate gradation ought also to be good." It would appear, therefore, that in every material breeding point of view, no animal can be depended upon, unless well bred in all respects, and perfectly good in itself.

It is further observed, in respect to the improvement as well as the decline of breeds, that they are in general gradual, and proceed but slowly through several generations. And hence it is not at all inconsistent to say, 'that animals have

at length been produced very unlike their original stock:' and yet, at the same time, there is in nature a strong tendency for 'like to produce like.' But this remark, respecting the slowness of change, refers, it is said, to distinct breeds, and also where any particular family is not crossed with others that are much better or much worse of the same kind; but does not include adventitious circumstances, such as pasturage, climate, and some others. And it is on account of this slowness of procedure, it is said, that so many who have originally engaged in the improvement of stock, have been obliged to expend a considerable sum of money before they could obtain any material advantage; while those who have purchased from that stock, when improved, have reaped an immediate, and even a large, profit."

The success of the endeavors of the breeder, to whatever sort of excellence his attention may be directed, must obviously in a great measure depend upon the accuracy and correctness of his judgment in choosing those breeds, of whatever sort of live stock they may be, that are most adapted to his circumstances; and in selecting such individuals, both male and female, of such breeds as are the most perfect, and which excel in their different parts and properties; cautiously continuing to breed from them, without ever suffering the least intermixture by the admission of others of inferior qualities: advancing in this way with the nicest attention to such faults or defects, however trifling, as may arise, so as to alter and correct them by appropriate pairing in the succeeding generations. And as an indispensable assistant in this arduous undertaking, he must constantly have recourse to the aid of good and abundant keep at all seasons, with suitable degrees of shelter and warmth for both the old and young stock, so that they may never decline in flesh, or be checked in growth. Attention to these objects would seem to constitute the great secret of the important art of breeding live stock, which the superior discernment and unwearied perseverance of a single individual has raised to a degree of notice and perfection, that has had the happiest effects in bringing the improvement of our domestic animals to a state of excellence, unequalled in any other country.

All good stock, too, must be both bred with attention and be well fed; and it is necessary that these two essential points in this species of improvement should always accompany each other; for without good resources in keeping, it would be in vain to attempt supporting a capital stock, and with such resources it would be absurd to aim at a breed somewhat good in quality. However, as the circumstances of but few farmers admit of a total change, improvements of this nature can, in general, only be effected by degrees; for, though they may disapprove of what they have in possession, they may be able only to reject few of the inferior; but always for the future selecting the best for breeding and rearing, they will gradually render their stock more perfect. Undoubtedly, great improvements in cow-stock may be made, by proper selection of the best heifers in carcase and milk-bag for breeding stock, but more particularly by a judicious choice of the bull. Indeed, as prime, or first rate stock is in but few hands, and the owners generally ask higher prices than farmers in middling circumstances can afford to give, it would be highly advantageous, with this view, to have proper male stock provided by the proprietors of lands. In this way the letting of male stock in the midland and other districts has had much influence, and it is probably only by some encouragement of this nature that the highest improvement in this department can be attained. Much has, indeed, now been done in this way, in seconding the exertion and following the methods of the professed breeder, and in rendering improved stock better and more extensively known in most parts of the country; yet, as in general, trials will not be made in such matters, until the advantages of them are pretty well ascertained and understood, little can be done in many places where such improvements are scarcely begun, except by letting the common farmer have the use and benefit of such male stock at a tolerably easy rate. By these means much benefit would accrue, not only to the farmer, the professed breeder, and owners of such male stock, but to the country in general; while a fair degree of recompense may be reasonably looked forward to, by the promoter of such useful measures.

The above objects of the breeder will evidently be more or less readily and certainly effected, the more perfectly he is acquainted with, and capable of distinguishing between good and bad animals in the whole; and still further so, where he is able at once to see the most minute faults and imperfections, and to discover the various merits and perfections in them; as without these requisites he can never reach any great excellence in the art of raising or improving live stock.

Having thus discussed the principles, practices, properties, and other circumstances which seem most particularly to demand the attention of farmers and graziers, for the purposes of breeding and improving different sorts of live stock, we may now take a concise view of the nature and circumstances of the most remarkable breeds or kinds.

[From the London Lancet.]

Lectures on Veterinary Medicine, *Delivered in the University of London, by Mr. Youatt.*

lecture iii.

The Nasal Cavity in the Horse, the Ox, the Sheep, the Swine, and the Dog.—(Continued.)

Of the other bones, Gentlemen, which from the parietes of the nasal cavity, my description will be brief. Few points of practical importance can be connected with them, and I have too much to do in the present course to be delayed by that which does not immediately bear upon the functions of parts, or the nature of disease.

The Superior Maxillary.—In the horse, this bone forms by far the greater part of the lateral portion of the external parietes of the cavity of the nose, and the central portion of the floor of it; in fact, it constitutes more than three-fourths of the bony wall of the nasal cavity. The superior maxillary will be best described, when we consider the digestive system to which, as containing the teeth—the agents of mastication—it most properly belongs. I will now content myself with pointing out to you on its internal surface, the attachment of the inferior portion of the superior turbinated bone, along the suture connecting the superior maxillary with the nasal;—the curious depression, or gutter, hollowed out in the middle meatus of the nose, or the channel through which the secretions, natural or morbid, from the nasal cavity, and the maxillary sinuses, are discharged;—the prominent, but irregularly-formed ridge for the attachment of the inferior turbinated bone;—the more spacious hollow beneath, constituting the inferior meatus, or the principal or only air-passage;—the inferior portion of the bony canal which contains the anterior maxillary nerves, and also the inferior division of the bony portion of the lachrymal duct. You will likewise observe, that the palatine processes of this bone form the central and greater part of the floor of the nasal cavity and the roof of the palate; and that, denticulated with the suture that unites them, is the vomer, running along the whole of the floor, and supporting the cartilaginous septem by which the cavity is divided.

In Cattle the superior maxillary bones will be found like the nasals, and for the same reason, considerably smaller; but in addition to this, other bones encroach upon them, and particularly the palatine bone at the floor of the cavity. The other points of difference are, so far as the nasal cavity is concerned, the greater length and size of the canalis infra-orbitarius, and the thickness of the floor; not consisting of a single plate of bone, or with a very slight diploe, but hollowed out into numerous and deep cells, and being a continuation of the mixillary sinuses. In addition to this, we may remark the shortness of the nasal cavity compared with that of the horse resulting from the shortness of the superior maxillary bone.

In the Sheep, the superior maxillary is shortened almost as much as in the ox.

In the Swine it is diminished, by the intrusion of the anterior maxillary for the purpose of strength; and *in the dog*, while the bone is enlarged for the more extended and powerful insertion of the muscles of mastication, even so as to push the lachrymal bone from its place, the nasal surface is increased by the depth and projection of the bone, rather than by its length; while it is curtailed below, even more than in the ox and sheep, by the circular expansion of the palatine bones. The shortness of the bony canal of the anterior maxillary nerve, is very remarkable; the bulk and strength of the massater muscle seeming to require this earlier appearance and distribution and communication with the motor branches of the portio dura of the seventh pair.

The Anterior Maxillary Bones.—These are the *inter-maxillaries* of the comparative anatomist, locked between the superior maxillary bones, and also belonging to the digestive system.

In the horse, their posterior borders run along the anterior and upper edge of the superior maxillary, between which and the nasal bone, the extremities of it are inserted. They thus leave a large angular space, which is occupied by the soft parts that constitute the nostrils, and that are moveable, and can expand or dilate as the respiration or the breathing of the animal may require. These borders, narrow, rounded, and polished, afford attachment to important muscles presently to

be described. The inner surface of these processes forms an attachment for, and supports the lining membrane of, the nasal cavity anteriorly.

These bones, of which there is one on each side, uniting, form the rounded extremity of the upper jaw, in which the incisor teeth are inserted, and from the under, and palatine surface of which there proceed two long thin projections of bone, forming the anterior portion of the roof of the palate, and the floor of the nasal cavity.

In the Ox.—The anterior maxillaries of the ox, containing no incisor teeth, are small compared with those of the horse, and barely reach the nasal bones. There is generally a small portion of cartilage interposed between the extremity of the anterior borders of these bones, so that they seem to diverge from each other, forming a broad termination for the elastic pad or cushion which is the substitute for teeth here; and the palatine processes are longer and narrower, and leave a considerble space unoccupied, except by soft substance, in the roof of the palate and the floor of the nose.

In the Sheep.—These bones are similarly constructed as in the ox, except that the anterior extremities, constituting the base of the muzzle, are not comparatively so broad.

In the Swine, for the purposes of strength and digging to which I have alluded, the anterior border is somewhat sharpened, leaving but a small space for the nostril, and he wants not a more extensive one, for he is not an animal possessed of remarkable speed. The process of the anterior maxillary, received between the superior one and the nasal bones, is very much longer. In the horse it is not one-tenth part of the length of the nasal bone. In the hog it reaches two-thirds of the way up that bone. The attachment between these bones is likewise a complicated one, and all this to give strength to the part. The palatine processes here are more bony laminæ.

In the Dog, a beast of prey, strength is required in the anterior maxillaries; therefore the border is short, thick, and rounded; the opening of the nose is small, but round, instead of angular; the process between the superior maxillary, and the nasal is long, but not so wide as in the hog, and the connection between the bones is a denticulated and mortised one, and soon becomes obliterated. The palatine processes are wider than in the swine, but not so wide as in the sheep or the ox.

The Palatine Bones.—Constituting the crescentic, and posterior border of the palate and the nasal cavity, we find these bones. They are irregularly formed, and a perfect description of them would detain us for a length of time that we can ill spare. We first observe them at the termination of the palatine processes of the superior maxillary bones, as it were surrounding, but, in fact, locked in and supported by, these bones. They form, in all domesticated animals, a smooth round polished border at the point where the cavities of the mouth and the nose would terminate in one common passage leading on to the pharynx, and which border gives attachment to the velum palati, or soft palate, presently to be described, that partially or completely separates those cavities. If we trace this bone posteriorly in the *horse*, we find that it forms, on either side, the wall of the continuation of the nasal cavity from both nostrils, and which, now undivided, is called the ductus communis narium. It is separated from the mouth by the velum palati, and leads on towards the larynx. We here observe two processes on either side of this canal, one behind the last molar, and being the pterigoid process of the sphenoid bone, the other further back, and being a styloid, of sharpened process of the palatine bone, and having, in the recent subject, a beautiful cartilaginous hook or pulley, around which plays the tendon of the stylo-palatine muscle, or principal tensor of the velum palati. Externally we trace the connexion of this bone with the tuberosity of the superior maxillary; and, lying as it were between these two bones, that singular and important depression or hollow leading to the anterior and posterior palatine foramina, and the infra-orbital canal.

The principal difference in the construction of these bones in our other patients, consists in their relative bulk. In the *ruminant* the palatine bones occupy a far greater portion of the palate and the floor of the nose than they do in the horse. They particularly do so in the *ox*; and the walls of the ductus communis narium are considerably deeper. In the *hog* and the *dog*, the palatine bones throw an elliptical portion of no little development down the palate.—(*To be continued.*)

THE GARDENER.

An eighty feet Magnolia.—Those who are fond of flowers are advised to read the following article from Mobile, published in the New York Journal of Commerce: "This is the land of flowers, and moonlight evenings, and soft southern breezes. Here we have flowers in every variety from the little picaroon rose to the lofty and most magnificent magnolia. The magnolia is an evergreen, rising to the height of 80 feet, and often much more. The leaves are the deepest green, and so full that the branches are scarcely to be seen. Its blossom is of pure white, five or six inches in diameter, and of delicious fragrance.—This magnificent tree grows in great abundance in the woods adjoining Mobile, together with the titi, the cucumber tree, which is a species of magnolia, bearing still larger flowers, the accacia, and many others."

The Cereus Speciosissimus,

At Woodhall gardens, in Renfrewshire, attains an extraordinary size and beauty. The late excellent Mr. Henderson, gardener there, used soil composed of two parts of rich loam, three of decomposed manure, and one consisting of equal quantities of peat, sand, and broken tiles. The plant is placed in a large pot, and trained to the back trellis of a pine stove; where, in July, 1833, when I saw it, it occupied a surface of 84 square feet, and had 300 flowers all open at the same time. Mr. Denholm, the present gardener, gives this and other species of the Cactus family a more ample supply of water than is usually done, while they are maturing their flower-buds; and to this he attributes, in a great measure, the vigor of the bloom. In winter, when the plant is in a state of rest, little or no water is given.—*Juvenis. Glasgow, March* 7, 1834.

MISCELLANEOUS.

India Rubber Carpets.—Dr. Jones, of Mobile, in a letter to Prof. Silliman, says: "Having some India rubber varnish left which was prepared for another purpose, the thought occurred to me, of trying it as a covering for a carpet, after the following manner:—A piece of canvas was stretched and covered with a thin coat of glue, (corn meal size will probably answer best,) over this was laid a sheet of common brown paper, or newspaper, and another coat of glue added, over which was laid a pattern of house papering with rich figures. After the body of the carpet was thus prepared, a very thin touch of glue was carried over the face of the paper, to prevent the India rubber varnish from tarnishing the beautiful colors of the paper. After this was dried, one or two coats (as may be desired) of India rubber varnish were applied, which when dried formed a surface as smooth as polished glass, through which the variegated colors of the paper appeared with undiminished, if not with increased lustre. This carpet is quite durable, and is impenetrable to water or grease of any description. When soiled it may be washed, like a smooth piece of marble or wood. If gold or silver leaf forms the last coat instead of papering, and the varnish is then applied, nothing can exceed the splendid richness of the carpet, which gives the floor the appearance of being burnished with gold or silver. A neat carpet, on this plan, will cost, when made of good papering, about 37½ cents per yard."

Rail Roads in England.—There is now building in England what they term "the great Western Rail Road," which is to connect London and Bristol. Another is building between London and Southampton; another from London to Greenwich; another from London to Birmingham; another from Hull to Shelby; and the Northern Union Rail Road."

Golden Rule in Agriculture.—A practical husbandman, of the highest authority, assures us that the golden rule of agriculture—to use such manures as will make heavy land lighter, light land heavier, cold land hotter, and hot land colder—must never be lost sight of. He who knows and follows this rule, and he only, is a farmer.—*Central Courant.*

The total value of the manufacture of Iron, in the State of New York, is estimated at about $4,000,000 per annum.

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BALTIMORE PRODUCE MARKET.

☞ *These Prices are carefully corrected every* MONDAY.

	PER.	PROM	TO
BRANDY, Apple,	gallon.	$0 27	$—
Peach,	"	75	—
BEANS, white field,	bushel.	2 00	—
BEEF, on the hoof,	100lbs.	5 50	6 25
CORN, yellow,	bushel.	65	66
White,	"	65	66
COTTON, Virginia,	pound.	10	13
North Carolina,	"	11	13
Upland,	"	11	14
FEATHERS,	pound.	—	37
FLAXSEED,	bushel.	1 00	1 25
FLOUR—Best white wheat family,	barrel.	6 50	7 00
Do. do. baker's	"	5 75	6 25
Do. do. Superfine,	"	5 00	5 25
Super Howard street,	"	5 12	5 25
" " wagon price,	"	5 00	—
City Mills, extra,	"	5 37	5 50
Do.	"	5 12	5 25
Susquehanna,	"	5 25	—
Rye,	"	3 37	—
GRASS SEEDS, red Clover,	bushel.	—	4 50
Timothy (herds of the north)	"	3 50	—
Orchard,	"	3 00	—
Tall meadow Oat,	"	2 50	—
Herds, or red top,	"	1 25	—
HAY, in bulk,	ton.	15 00	16 00
Pressed,	100 lbs	—	90
HEMP, country, dew rotted,	pound.	6	7
" water rotted,	"	7	8
LIME,	bushel.	30	35
MUSTARD SEED, Foreign,	"	4 50	5 00
Domestic,	"	5 00	—
OATS,	"	38	40
OIL, linseed,	gallon.	—	90
Castor	"	1 70	1 80
PEAS, red eye,	bushel.	—	—
Black eye,	"	—	1 00
Lady,	"	—	—
PLASTER PARIS, in the stone,	ton.	3 00	—
Ground,	barrel.	1 37	—
PALMA CHRISTA BEAN,	bushel.	2 00	—
RAGS,	pound.	3	4
RYE,	bushel.	71	—
TOBACCO, crop, common,	100 lbs	3 50	5 00
" brown and red,	"	4 00	6 00
" fine red,	"	6 00	8 00
" wrappery, suitable for segars,	"	6 00	12 00
" yellow and red,	"	8 00	12 00
" yellow,	"	13 00	17 00
" fine yellow,	"	15 00	22 00
Seconds, as in quality,	"	4 00	5 00
" ground leaf,	"	5 00	9 00
Virginia,	"	4 00	—
Rappahannock,	"	3 00	4 00
Kentucky,	"	4 00	8 00
WHEAT, white,	bushel.	1 20	—
Red,	"	1 08	1 12
WHISKEY, 1st pf. in bbls	gallon.	28	29
" in hhds	"	26	—
" wagon price,	"	—	—
WAGON FREIGHTS, to Pittsburgh,	100 lbs	1 00	—
To Wheeling,	"	1 25	—
		washed.	*unwash*
WOOL, Prime & Saxon Fleeces,	pound.	50 *to* 60	24 *to* 26
Full Merino,	"	40 50	20 24
Three fourths Merino,	"	33 40	22 24
One half do	"	28 33	21 22
Common & one fourth Meri.	"	25 28	18 20
Pulled,	"	28 31	18 20

WOOL.

LYMAN REED & CO. Commission Merchants, No. 6 S. Charles street, Baltimore, Md.—devote particular attention to the sale of WOOL. All consignments made them will receive their particular attention, and liberal advances will be made when required. May 9.

SUBSCRIBERS can have their volumes of the AMERICAN FARMER neatly half bound and lettered at this establishment, at 75 cents a volume. Most of the Nos. can also be had at 10 cents each, to complete files.

BALTIMORE PROVISION MARKET.

	PER.	FROM.	TO.
APPLES,	peck.	$0 25	$0 37
BACON, hams,	pound.	10	—
Shoulders,	"	—	9
Middlings,	"	—	9
BUTTER, printed, in lbs. & half lbs.	"	25	—
Roll,	"	11	18
CIDER,	barrel.	—	—
CALVES, three to six weeks old	each.	4 00	8 00
COWS, new milch,	"	15 00	27 00
Dry,	"	9 00	12 00
CORN MEAL, for family use,	100lbs.	1 45	1 50
CHOP RYE,	"	1 56	1 62
EGGS,	dozen.	13	—
FISH, Shad, trimmed		—	—
" salted,	barrel.	6 37	—
Herrings, salted, No. 1 & 2,	"	3 87	4 00
Mackerel, No. 1, 2 & 3,	"	3 50	6 25
Cod, salted,	cwt.	2 75	3 00
LAMBS, alive,	each.	1 50	2 00
Slaughtered,	quart'r	31	50
LARD,	pound.	8	—
ONIONS,	bushel.	—	87
POULTRY, Fowls,	dozen.	—	—
Chickens,	"	2 25	2 50
Ducks,	"	—	3 00
POTATOES, Irish,	bushel.	—	62
New,	peck.	12	25
VEAL, fore quarters,	pound.	6	—
Hind do.	"	8	—

ADVERTISEMENTS.

LARGE WHITE FLAT TURNIP SEED, &c. JUST RECEIVED,

550 LBS. large White Flat, and Red Top TURNIP SEED, (growth 1834,) raised at the Clairmount Nurseries, by R. S. Senr. from the finest and best shaped roots.—The perfect success of Turnip crops produced from this seed for the last eight years, and the general satisfaction expressed by those who have tried it, added to the increased annual demand for the article from Eastern Seedsmen and others, is sufficient proof of its superior quality.

It is recommended "to sow the seed about the 10th August, on new cleared land, or well tilled clay or loam—quantity of seed required to crop one acre of ground ½ to 1½ lb.; if the latter quantity is sown it will be necessary to cross the plants with a harrow, after which follow with hoes, leaving the plants about 12 inches apart." For further information relative to preparation of seed, cultivation, &c. see R. Sinclair's remarks on Turnip crops in the American Farmer, volume 8, page 138. Price $1 per lb. and a liberal discount to those who purchase to sell again.

Also, early round Dutch Turnip Seed, Norfolk or large white, white Tankard, yellow Bullock, Ruta Baga, and Dale's new Hybrid Turnip Seeds, at 75 cts. to $2 per lb.

Pickling Cucumber Seed of best sorts, Endive, Brussels Sprouts. Lettuce of various sorts, among which are brown Dutch; large white Cabbage and Cilicia—the three most esteemed sorts; Hybrid or Yellow Turnip Radish, and blue curled Greens, a superior sort for fall sowing, raised from selected plants.

500 lbs. prime early Cabbage Seed, (growth 1834) raised near London, consisting principally of early and large York, early George, Bullock's heart, Battersea and Sugar loaf. The vegetative qualities of those seeds have been fully tested in hot beds prepared for the purpose, and to insure certain success and prevent disappointment to those who purchase, plants of each of the above have been transplanted, and are now flourishing, which will enable a true description to be given of their quality, appearance, &c. before the 1st of September, which is the usual time of sowing.

R. SINCLAIR, Jr. at
SINCLAIR & MOORE'S
July 22. Maryland Agricultural Repository.

CUBA TOBACCO SEED.

JUST received from Matanzas, a few ounces of the true Cuba Tobacco Seed, from *la Vuelta Abajo*, warranted in prime order—Price $1.00 per ounce.

I. I. HITCHCOCK.

GAMA GRASS SEED.

A SMALL quantity just received, and for sale at 50 cents per ounce, by

I. I. HITCHCOCK.

IMPROVED DURHAM SHORT HORN BULLS—CHEAP.

I AM requested by a gentleman of high character as an agriculturist, in a neighboring state, to offer for sale several Bulls of his, of which he has yet given me no other description than the following, viz: "My stock is of the Short Horn Durham breed, and derived from the best and purest sources, imported recently." He offers Bulls two years old, one year old, and of the last spring, at the following prices respectively: $200, $150, $100.—If, as I presume from the character of the gentleman, his stock is of a high order, and if he can, as I also presume, furnish pedigrees of pure blood, then is the present a rare opportunity to procure fine Bulls, at more moderate prices than I have hitherto been able to offer them. I will ascertain further particulars in regard to this stock, and be able shortly to speak definitely as to its character. In the mean time, should any gentleman want one or more of these Bulls, he may rely entirely on receiving through this Establishment no other than such as shall be represented and proved too.

Address I. I. HITCHCOCK,
July 15. American Farmer Establishment.

NEW LEICESTER BUCKS.

I AM authorised to sell several fine Bucks of the Leicester or improved Bakewell breed of Sheep, at from $75 to $100 each. Who will have one or more?—

I. I. HITCHCOCK,
July 15. American Farmer Establishment.

DALE'S NEW HYBRID TURNIP.

THE subscriber now offers to the agriculturists a new and decidedly superior variety of Turnip, originated by R. Dale, esq. an intelligent farmer, near Edinburgh, Scotland; it was obtained by unwearied attention in crossing the Swedish or Ruta Baga Turnip; it is superior in size and flavor to the Ruta Baga; is closer and finer in the texture; it is rapid in its growth as the White Flat Turnip. In fact, it includes the great desideratum in the selection of a proper variety of the Turnip which is to obtain the greatest possible weight at a given expense of manure. This variety seems to be more adapted to this end than any other sort introduced; it will be found superior in quality to any of the White Field Turnips, and keeps longer than any of them, and very near as long as the Ruta Baga—the color is yellow—the shape oblong. Price 25 cents per ounce. The season for sowing is at hand.

I. I. HITCHCOCK
10 June Amer. Farm. Estab.

THE 7-8 SHORT HORN DURHAM BULL "DUKE" IS FOR SALE.

DUKE is 2 years old, red and white, by Parson, dam Isabella; Parson is by Bishop, dam, Moss Rose, (imported in 1821, bred by Mr. Ashcroft,) got by Phenomenon—Isabella is by the celebrated imported bull Lothario, dam, Meg, by Billy Austin. Duke is of uncommon fine size and figure, pronounced by judges to have every point and appearance of a full bred. Price (to suit the times) $150.

Also—Several 3-4 blood HEIFERS, with their first calves, will be disposed of at $100 each. Application to be made (post paid) to I. I. HITCHCOCK,
May 30 American Farmer Establishment.

GRAY OR GAZE HOUNDS.

LAST September, I received from the President of the United States, for the breeding farm of this Establishment, a pair of these very beautiful and powerful animals, which had been sent out to him from Holland, by the American Consul there, and in vol. 15, of the American Farmer, page 233, I published the letter accompanying the very acceptable present. I have now the satisfaction to offer for sale four (female) puppies—their issue. They will be ready for delivery in all the month of July. Price $20 each.

I. I. HITCHCOCK,
American Farmer Establishment.

TURNIP SPINACH & CABBAGE SEED.

A FULL supply of these seeds of several of the best varieties for summer and fall sowing, now on hand and for sale by I. I. HITCHCOCK,
july 1 Amer. Farm. Estab.

UNDERGROUND TURNIP.

THIS turnip is represented as able to resist frost in an extraordinary degree. (See description of it in the first page of this No.) For sale at the American Farmer Establishment. Price $1 per pound. jy 8

THE FARMER & GARDENER;

AND LIVE-STOCK BREEDER & MANAGER.

CONDUCTED BY I. IRVINE HITCHCOCK, AND ISSUED EVERY TUESDAY FROM THE AMERICAN FARMER ESTABLISHMENT, AT $5 PER ANNUM, IN ADVANCE.

No. 13. **BALTIMORE, JULY 29, 1834.** **Vol. I.**

☞This publication is the *successor* of the late

AMERICAN FARMER,

(which is discontinued,) and is published at the same office, at five dollars per year, payable in advance.

☞When this is done, 50 cents worth of any kind of seeds on hand will be delivered or sent to the order of the subscriber with his receipt.

American Farmer Establishment.

BALTIMORE: TUESDAY, JULY 29, 1834.

A RAM, IMPORTED BY J. BARNEY, ESQ.

We have had the pleasure of receiving another letter from our friend, Mr. J. Barney, of Philadelphia,who has just been increasing his flock by the purchase of one of the finest young Rams we have heard of lately—He says: 'I have just been to N. York to look at two imported sheep, year old Rams—I have purchased one of them for $150, cash; when all expenses are included, he will cost $200 by the time he arrives at the Girard Farm. He is a great sheep; he sheared 12¾ lbs. of wool washed—he is of the Bakewell, crossed with the Yorkshire breed. The other was sold for $160, with two of my ewes at $50 each, and taken to Sciota Valley, Ohio.'

Mr. B. observes that wool 12 to 13 inches long and a fleece of 12¾ pounds on a year old sheep is not often to be seen. We perfectly agree with him; such an animal is not often to be seen, and we are very much gratified that this noble animal has fallen into such good hands; we may be well assured that the most will be made of him.

CAPT. MATTHEWS' POTATOES.

Captain Wm. P. Matthews, of Chestertown, E. S. presented us a few days ago with a specimen of his spring crop of potatoes,which appears to be of a new variety. They are of a pure white, of good size, and come very early—they likewise appear to be very prolific; they were planted in March—the 25th of May they were fit for use, and some were dug the 15th of June; those remaining in the ground, were found to be sprouting—they were taken out and a second crop was planted on the 25th of June, and also on the 10th of July.

They are very beautiful potatoes to look at, and there is no doubt that they will be found a valuable variety. The Captain is also engaged in raising some from the seed of the potatoe ball, and we may expect some new varieties will be produced. If experiments of this kind were oftener put in practice, much improvement might be expected to result from them.

It will be seen under the Horticultural Report, that he has been no less successful in raising Beets —some of the largest of the kind we ever saw, were presented by him to that society for exhibition.

SKINLESS OATS.

SKINLESS OATS.—At a late meeting of the Warwickshire Agricultural Society, a specimen of the *Avanacia Tarina*, or Skinless Oat, was produced by the Revd. Mr. Knott which had been plucked out of a piece of ground belonging to him at Wormlighton.

According to the account furnished by Mr. Knott, it was grown in the season of 1830 for the first time in Great Britain by Thomas Devenzy, Esq. of Clebernon Hall, and the seed came from a remote district in China.

The advantages which this extraordinary and valuable grain possesses over all other kinds of Oats are, that when thrashed from the sheaf it is free from rind or husk, and fit for immediate use for culinary purposes, and every other use which oatmeal is consumed for, and the flavor is delicious, containing much more farinaceous matter. One peck contains more nutritious food for a horse than three pecks of common oats; the produce is most astonishing, the average being 26 barrels of 14 stone to the Irish acre; it was sown 4th May, 1830, and reaped early in August; it is remarkably hardy and well adapted for the climate.—The above is an extract from the Cambrian newspaper.

☞See Advertisement.

MARYLAND HORTICULTURAL SOCIETY.

A stated meeting of the council was held on Saturday Evening, 26th inst.

A parcel of seed of the Mexican coffee was presented by the Rev. Mr. Knight of St. Mary's College.

Capt. Wm. Matthews of Chestertown presented two very fine turnip rooted beets, weighing 5 lb. 9 oz. and measuring 24 inches in circumference; and two potatoes of a new and valuable variety, which produce two crops the same season.

Mr. Stronick, gardener to John B. Morris, esq. exhibited a peck of very fine Mercer potatoes.

The gardener at Rose Hill, seat of James Gibson, esq. presented a very large and fine long green Cucumber.

Mr. Waters presented fine specimens of the red magnum bonum plum.

Mr. S. Feast presented branches of the Siberian crab apple, *with ripe fruit and flowers on the same spur*. Mr. Feast thinks that this singular circumstance is attributable to the *locust*, as every branch on the tree that is cut by that insect has produced flowers at this uncommon season.

Mr. Waters exhibited specimens of canna flaccida, volkameria japonica, seedling rudbeckia and chinese rose.

Mr. G. B. Smith presented specimens of the Claudius Cæsar, and a fine double seedling Dahlia of a rich royal purple.

Mr. S. Feast presented ruella formosa, bouvardia coccinia, osher plant, and yellow nankeen cotton, the seed of which was sent home by Mendes I. Cohen, esq.; Dahlias, yellow tea rose, &c.

Mr. Joseph King, jr. exhibited a specimen of jasminum lucidum, gardenia capensis, verbena melindres, plumbago capensis, cobea scandens, &c.

PACKING GRAPES.

PACKING GRAPES.—The following is the mode of packing grapes which I adopted with success for many years, having to send them nearly three hundred miles. A box having been prepared, a bed of clean wool, well separated, was laid in the bottom, on which a layer of grapes was placed; each bunch being separately enveloped in the tissue paper. A portion of wool was then introduced between each bunch, and all the interstices filled up withit, and then a layer of wool put over the top. For a second layer, a small ledge of wood was fixed at each end in the box at the level wanted, and a thin board made to fit it easily, so as to fall down upon the ledges; in the board there were two finger-holes made with an inch centre-bit; and the board, being fixed down upon the ledges, with a couple of small brads at each end, driven in half-way, a second layer of grapes was laid in as above, and so on for a third layer, if wanted. I think Mr. Wilson will find the above method of fixing in the separation board an improvement upon his mode; at least I preferred it, after trying both ways. The finger-holes I also found very convenient for getting out the board, after drawing the small brads with a pair of pincers. In cases where wool is an object, or may be thought too expensive, moss well dried, cleaned, and threshed, will be found a tolerably good substitute; but the superior elasticity of the wool renders it preferable.—*T. Rutger. Shortgrove, Feb.* 1834.

SCARCITY OF WIVES.

SCARCITY OF WIVES.—It is said that in South Wales an old maid is a much rarer animal than a black swan. It is asserted that the fair emigrants from this country receive offers of marriage through speaking trumpets, before they land from the ship. In this country, however, it requires something louder than *speaking trumpets* to make them keep their distance!—*N. Y. Star.*

THE FARMER.

Calcareous Manure.

A gentleman from Kent county called at our office a few days ago, and gave us some account of his management on his farm, who, we think, has gone to work in the right way.

In the first place, he has made a purchase of a plantation on the Eastern Shore of Maryland, on navigable water, instead of going to the western country (perhaps) a thousand miles from a market—this strikes us as a judicious step in the commencement, for we believe there is no part of the union where lands are offered for sale more below their intrinsic value, taking all circumstances into consideration, than on the Eastern Shore of Maryland.

The plantation under consideration, contains large masses of oyster shells, lying on the banks of the rivers and creeks which, in all probability, once formed the beds of the several streams.

The owner of this plantation has made a kiln, and is burning his shells into lime, which he sells to the farmers, delivered on the navigable streams to a certain distance at eight cents per bushel, or sells the lime at the kiln for five cents per bushel. He informed us, he has many thousand bushels bespoke, and there is no doubt he will have shells enough in this way to pay all expenses of burning, and to return to him the purchase money for his land, besides leaving a sufficient quantity to enrich his own land, provided a proper rotation of crops be instituted, for ages to come. When we consider the natural advantages of the location of this plantation, having such facility in approaching the three great markets of Baltimore, Philadelphia and New York; and that the land is free of charge!—for nothing!! we think it may be safely said, that lands cannot be purchased on better terms in the union.

The attention of Farmers has been but lately directed to this source of calcareous manure; though, it has been presented to their senses in more ways than one, for ages past.

These shells undergo a partial decomposition, and when placed in the soil are in the same proportion rendered useful as a manure; but when suffered to remain in large masses, they are in an equal ratio deleterious to animal life, and operative in rendering their vicinity unhealthy.

These beds of undecomposed shells have by some been called marl; but they have no other claim to this title, than, as they have become decomposed and entered into a new combination with clay, sand or other substances. They are altogether distinct from that article, of which we have sometimes spoken as the marl of New Jersey, and require a different management, to reap the full benefit which they are capable of imparting to the land.

The oyster shell, when divested of its animal substance, is a pure carbonate of lime, containing 41.4 parts of carbonic acid, and 55 of calcareous earth; and in this state, they are as unchangable, without the application of fire or some chemical test, as quartz or mica. Unless there exist in the earth, some acid for which lime has a stronger affinity, than it has for carbonic acid, the shells will remain unchanged, and will exert no other effect as a manure, than would be done by sand or broken bricks—without chemical action they would merely operate mechanically in separating the particles of a too adhesive soil.

When calcined, they yield a quick lime perfectly free from any metallic or fossil substance; and being less perviable to water, they make a superior mortar for plaistering walls, and are in high estimation for that purpose with the Dutch, who make their excellent cement with burnt shells.

Some have objected to burning the shells for manure, under the impression that they contained an animal matter, which would be destroyed by the action of fire; but we cannot conceive that they still contain any matter of that kind after lying for centuries exposed to the action of the atmosphere; and even in fresh shells, the animal matter which they may contain, would be far more than compensated for by the chemical action of the lime which would be gained by calcination.

If the vast beds of shells, which abound on the Chesapeake and its tributary streams, had been combined with sulphur, or had a free sulphuric acid been present in the soil to combine with the shells, and the carbonic acid had been, thereby, in part dispelled, and the shells disintegrated, other combinations would have been formed, which would have effloresed on exposure to the atmosphere, and in that state the mass would have constituted what is called marl.

Pure sulphate of lime, or gypsum, contains lime 32 parts, sulphuric acid 46, water 22—it is sometimes contaminated by carbonate of lime, alumine, selex, and oxoyde of iron, when it obtains the name of Plaster of Paris.

It will be observed that the difference between oyster shells and marble is this, the shell is in the form of an animal secretion, and the marble, supposed to be of the same origin, but has been in a state of solution, and now in a concrete or granular form. Gypsum, or Plaster of Paris, is composed of the same earthy basis, but combined with different acid. It contains the sulphuric, and marble the carbonic acid.

On the Management of Farms.

We publish below a letter from John C. Brickenstein, Esq. who is soliciting from us answers to several questions of much interest to agriculturists in general, as well as to ourselves. It gratifies us to see that our labors are not all lost.—The result which our correspondent describes as being produced upon himself by reading our pages, we hope may be extensively felt, viz. the keeping up an excitement concerning agriculture; saving his bacon in superior order, and curing his hay with less expense, &c. &c. These are valuable considerations for his time and money, and we hope many others may have like inducements for continuing the perusal of our pages. But there is another consequence flowing from his excitement, which, to us, is not less interesting than those he has mentioned, it has induced him to diffuse the result of his excitement upon paper, and to give us a letter, replete with good feeling and close observation. We could wish this excitement might prove as contagious as *Influenza;* or, if it should not prove an epidemic, that it might, at least, prove a wide spreading endemic, throughout our land. We fully reciprocate the good feeling expressed by Mr. Brickenstein for the south, and regret our inability to give him all the information he desires; but we hope some of our talented southern gentlemen will come to our aid, and take up the correspondence, to supply our deficiency. We doubt not it would be a source of mutual gratification and instruction to the farmers of the north and the south, to have the minutia of their course of agriculture, and modes of managing farms compared; and we freely offer our pages as the medium through which such a mutual interchange of sentiments may be kept up.—Our subscribers must undoubtedly understand that the value of our pages must depend in a principal degree upon their own communications. It is not possible for us to give detailed statements of the productions and management of farms, when we have never been within a thousand miles of them. Were we to presume upon such a course, our recommendations would indeed come under the high accusation of *book farming*, or as it is sometimes called, *silk-stocking farming*. No, no, the part we have to perform is a very humble one indeed—we *ought to be* merely the attendants on the press, to superintend the arranging and printing of the written observations of experienced and practical farmers, made after closely observing the effects of their own labors, and judging of cause and effect. Such reflections would be calculated to remove the disparagement, which is with too much jus-

tice, often cast upon books on agriculture, as well as on other branches of business, where they who presume to be instructors, draw upon their imagination, instead of drawing inferences from reason and experience.

The science of agriculture is yet in its infancy, and the practice, consequently, irregular and unproductive. Careful observation, made by practical men, who, by collecting and recording the facts they observe, will enable others to reason upon them, and to establish the general laws connected with the art of raising vegetables. When these laws are collected, and the *modus operandi* of all the phenomena we observe in a course of agriculture, can be arranged under known laws, and comprehended, then we may dignify our profession with the name of the Science of Agriculture.

Every high-minded, honorable agriculturist, should feel himself impelled by an imperious sense of duty, to cast in his mite towards accomplishing this desirable purpose. As to the irregularity in the arrival of our papers, that fault lies at another door; we put them up and mail them regularly; but there is so much extra allowance for carrying the mail, we suppose the conscientious mail contractor thinks himself in duty bound to perform extra duties, and carries them round by Pittsburg by way of a salvo.

Emaus, July 11th, 1834.

To the Editor of the Farmer & Gardener:

Sir:—I enclose $5 (a note of the Northern Liberties of Philadelphia,) your due for vol. 1 of the Farmer & Gardener; but I know that by paying you I have not discharged all my obligations; please, therefore, to receive my thanks for the pleasure and gratification I often have derived from the perusal of the Farmer. To me the most interesting parts are generally the description or history of some farm, the owner of which has been endeavoring to improve it. Can't you give us some such information of Maryland, Delaware, &c. farms. I always thought the character of the American Farmer, in contradistinction to local farmers, should be its universality; and though you have dropt the "American," you have not substituted a local appellation, so that your sphere has been enlarged, not narrowed, by this change. How delightful would it be to receive information through your paper of the state of agriculture in *all* the different states of this Union, prepared by competent persons, dealing not in generalities but in details. Pennsylvania is hardly ever mentioned in your paper—we have no Farmer, but farmers enough:—for the rest I am very partial to the south, and never get tired reading about it.

When you have leisure, please give us an article on the manner the land holders in the south manage their large estates. Imagine to yourself a northerner, surrounded by farms of from 10 to 100 acres, every foot of which is under the personal inspection and cultivation of the owner or tenant, and explain to him the ways and means of administrating half a dozen of farms or plantations of some 1000 acres each. Is it done by tenants, managers, overseers, or how? What is the authority, responsibility and situation of such managers? Are colored persons, freemen, or slaves, employed as such? Would it be possible to cultivate a plantation, in South Carolina for instance, or in Maryland, by the hired labor of free persons of color? if not, for what reason? On what terms can plantations be rented? (In our parts, for instance, there is a large farm let for a rent of 2½ bushels of wheat to the acre, the tenants of which get rich in proportion to the stock they are able to command.) Can the necessary stock of laborers be rented in condition with a plantation? What is the usual term of leases? the price of lands worn out? Can you give us some information about the Ulex Europaeus, or prickley gorse, introduced by President Jefferson, upon his estate near Charlottesville, Virginia? Is it still neglected? Why is it not extensively cultivated in this country? European agriculturists consider it a very valuable plant, and raise it to advantage, for the benefit of their dairies.

The practical benefits of the perusal of the American Farmer in my instance, have been, * excellent pork cured with hickory ashes, in conformity with its receipts; a crop of good hay secured in rather unfavorable weather, *without any anxiety of mind* and useless expenses; and now I am entering upon a ruta baga speculation, but shall not be able to comply exactly with the rules laid down in the Farmer; I must dispense with 2 out of 3 ploughings, as I intend sowing the turnips in rye stubbles, fresh manured with compost manure and ashes. Next year I shall be obliged to lay out a new garden, when I shall have frequent recourse to your pages: can you recommend some few shrubs both useful and ornamental? Morus Multicaulus shall obtain a place. I also intend to lay out a grass garden, that is, different plats for a variety of different grasses, for mowing in summer, a luxury which, it is hoped, my cows will enjoy, and gratefully acknowledge by yielding a profusion of rich milk. I shall be glad to accept of the bait of 50 cents worth of gama grass seed, which you have offered to your subscribers as an inducement to do their duty, if you are convinced what you send me are actually seed. I receive your paper very irregularly, sometimes none for two or three weeks, and then three or four together; returned, in some instances, from Western Pennsylvania, and in bad plight.

Finally, accept my best wishes for the success of the Farmer & Gardener, &c. The Philadelphia note I hope will answer. I should have made the remittance sooner, but spent the time in useless endeavors to get a note of the 'Monster.'

JOHN C. BRICKENSTEIN.

Emaus, Lehigh Co. Pa.

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*First of all, the keeping up an excitement concerning agriculture, the interest for which otherwise will flag sometimes.

The Coal Trade.—The amount of Coal shipped from the Schuykill, Lehigh and Lackawana Regions, up to the 25th of May, 1833, was upwards of 83,005 tons. Up to the same time the present year, the amount shipped from the above mentioned regions is only 43,947 tons.

THE GARDENER.

[From Nuttall's Introduction to Botany.]

Of the Vascular System of Leaves.

Among fallen leaves, which have been exposed to the action of the atmosphere in a damp place, or which have dropped into a pond, we generally find some in which the cuticle and pulp are completely destroyed; whereas the ribs, or veins, as they are commonly but erroneously termed, being less susceptible of decomposition, remain almost entire, and display the appearance of a beautiful tissue of net-work, more or less complicated. This is the vascular system of the organ, and the leaf in this state is termed a *skeleton leaf*. Leaves are frequently thus prepared by maceration in water, when the cuticle becomes easily separable by gentle rubbing and pressure; and the pulp may then be washed out from between the meshes of the vascular net-work, by rinsing in water: and if the operation be carefully performed, the most minute cords of vessels may be preserved. These preparations enable us to trace more readily than in the natural leaf, the divisions, subdivisions, and various ramifications of the vascular fasciculi; but beyond this they afford us no information, and we must have recourse to the microscope to obtain a satisfactory knowledge of the vascular structure of leaves.

If we commence our investigation with the simplest description of plants, the Lichens, and the Mushroom tribe (*Fungi*,) for instance, we perceive, even by the assistance of the best glasses, scarcely any trace of a vascular structure; the whole plant appearing to be little more than an aggregation of cellules enclosed in a cuticle. This appearance, however, arises in some degree from the transparency of the vessels, preventing them from being distinguished from the cells, and in some degree from the simplicity of their structure; for, as the fluid they convey is not required to be raised to considerable heights, as in the more perfect plants, the conducting tube is consequently more simple. If, however, we take a plant in which the vessels convey a colorless fluid through a colored cellular structure, as, for example, *Marchantia polymorpha*, we find that the surface of the lobes of the leaf-like frond, when examined by an ordinary lens, is reticulated by depressed lines, within each of which a small, nipple-like body rises. When a thin slice of a lobe is placed under the microscope, these lines are discovered to be occasioned by vessels which run immediately under the cuticle, seeming to anastomose with one another. This vascular net-work appears as if formed by a single porous tube, branching and anastomosing so as to form irregular, lozenge-shaped meshes, which are filled with dark-green cellules. The vessel itself is closely connected with the cellules, of which it is probably a mere variety, in no part extensively continuous, and when separated, bears the marks of the cells on its sides. We find nearly the same vascular structure in the Mosses. The leaves of all the mosses are sessile, although many of them are sheathing: and most of them are furnished with a midrib; but their minuteness prevents any certain information being obtained as to the manner in which the leaves receive their vessels from the stem, or whether there be a distinct set of returning vessels: they

appear to be merely a continuation of the vessels of the cortex of the stem.

Proceeding to the next division of plants; those produced from *monocotyledonous seeds*, we observe the costæ or vascular bundles, distinguishable by the naked eye; of different sizes, and running in gently curved or nearly straight lines, either from the base to the apex, or transversely from the midrib to the margin of the leaf. The former is found chiefly in those leaves which have no decided petiole, but spring directly from a bulb or a tuber: the latter in those which are petiolated. We shall examine each kind separately.

A bulb leaf of the White Lily (*Lilium candidum*) may be taken as an example of the general distribution and character of the vascular system in the first description, the *sessile leaves* of monocotyledonous plants. On examining it, we find that the vascular frame-work consists of a distinct midrib, which forms the keel of the leaf, and of less elevated ribs (*costæ*) that extend on each side of the midrib in longitudinal lines,which form a gentle curve, following the shape of the leaf. In the smoother and more succulent leaves of this division, however, these costæ are scarcely visible externally, or at least appear merely as lines on the surface of the leaf: and this is the case, also, as far as regards many of the smaller vascular fasciculi, even in those leaves, which have prominent ribs. If we now make transverse and longitudinal sections of the Lily leaf, we perceive that the costæ are composed of bundles of spiral vessels closely accompanied with corresponding fasciculi of proper vessels, and imbedded in cellular substance: or, that the leaf has a double system of vessels, one for conducting forward the sap, and the other for receiving the proper juice, into which the sap has been changed by the functions of this organ. In the transverse section, these vascular bundles appear like dots upon the divided surface; and, when magnified in transmitted light, display their two-fold nature by difference of transparency; the part of each bundle composed of spiral vessels, being distinguished by a greater degree of opacity, owing to the spiral thread which composes the coats of these vessels being firmer and more opaque than the coats of the proper vessels. The spiral vessels of the leaf, as well as those of the stem, are found generally empty, while the proper or receiving vessels, or vasculoid cavities, are always full. In the majority of leaves the spiral vessels have a closer proximity to the upper than to the under disk; in accordance with their relative position in the stem, the spirals arising from the coat of alburnum, pass towards the surface of the leaf, while the vasculoid cavities, or entire vessels issuing from the bark, incline to its under surface. In leaves, however, which stand vertically, or have no distinction of surface, (as in the *Iris*,) the situation of the spiral vessels is either the reverse, or in the centre of the entire vessels: anatomy thus confirming the idea of the close affinity of such leaves to stems.

It has already been stated that the bundles and threads of vessels, in leaves belonging to this division of the class under consideration, run in longitudinal lines. These are not exactly parallel, but approach, both at the base and the apex of the leaf; and, also, communicate laterally in their course by small threads, given off at irregular intervals; as may be seen in a slice of the Lily leaf cut immediately within the cuticle of the upper disc, and placed beneath the microscope.

The vascular system, then, of the sessile leaves of monocotyledons, consits of fasciculi composed of spiral vessels, accompanied with proper vessels, or vasculoid cavities, arranged in longitudinal lines, and connected by smaller transverse threads; the whole forming a reticulated texture, with irregular rhomboidal meshes. The longitudinal vessels are a continuation of that series which is nearest to the surface, in the root, caudex, or stem, from which the leaves immediately spring; and thus the greater number of the circles of distinct fasciculi, composing the stems of monocotyledons, terminate in leaves until the plant attains its ultimate growth.

There are two natural anatomical subdivisions of the *petiolated* leaves of monocotyledonous plants: namely, 1. Those in which the ribs run *longitudinally*, or in a direction from the base to the apex of the leaf; and, 2. Those in which they run almost *transversely*, or in the direction from the midrib to the margin.

1. In this subdivision we perceive, that, in the Grasses, the vascular bundles resemble very closely, those of the former division; the ribs being in longitudinal, nearly parallel lines, converging towards the point of the leaf, and united at irregular distances by obliquely transvere threads. If we take a stem-leaf of Indian Corn (*Zea Mays*) as a specimen, we perceive the petiole, which is broad, expanded, and sheathing, deriving its origin from the whole circumference of the knot of the articulation which produces it; dilating gradually, as it rises upwards, until its edges become a thin, fimbriated membrane, and again contracting, but less gradually, at its upper part, or where it is united to the expansion of the leaf. The vascular bundles, which can be readily traced by the naked eye, are composed of two distinct kinds of vessels, which appear as dots in a transverse section of the petiole, situated almost close to its external surface. The number of the spiral vessels in each fascile is generally six, three larger and three smaller, symmetrically arranged, as may be seen in a transverse section of one of the bundles viewed under the microscope; and the whole surrounded by a mass of much denser cellules than in the rest of the substance of the petiole. The proper vessels are much smaller and more numerous than the spiral; and appear aggregated into a bundle which occupies a space close to the former, between it and the cuticle, and is bounded by a mass of the same dense cellules as those which surround the spiral vessels; the object of which is, probably, to give such a degree of firmness to the petiole, as will enable it to sustain, in the erect position, the expansion of the leaf. If we now make a vertical section of the petiole, so as to divide one of the fasciculi longitudinally in the thickness of the petiole, we perceive that the larger vessels are regular spirals, furnished with diaphragms at certain distances, the structure of which, however, we shall perhaps never be able to ascertain, owing to the minuteness of the parts; the diameter of these vessels, although comparatively large, not exceeding $\frac{1}{300}$ of an inch. In this section, also, the proper vessels appear membranous and porous; and the cells in immediate contact with both sets of vessels are oblong; whereas those which are between the proper vessels and the cuticle of the outer surface of the leaf, and which form the elevated portion of the costæ, although they are oblong, yet differ both in size and in regularity of structure from those that form the inner substance of the petiole.

Ascending to the expansion of the leaf, which is separated from the petiole by a semitransparent white, condensed, membranous space, from which the expansion of the leaf spreads out like a shoulder on each side, we perceive that the midrib, which is not distinguishable in the lower part of the petiole, becomes very conspicuous on the under disk at this point; forming almost a knob, which passes into a straited ridge, and extends, gradually diminishing in size, to the point of the leaf. From 10 to 12 parallel costæ are visible on each side of the midrib, which, when magnified, appear like white parallel lines, running through the green smooth substance of the expansion, and taking the curve of its shoulders, as if originating in the white, semitransparent space already described. But between these costæ there are several smaller vascular cords, which are scarcely visible on the surface, neither producing elevation nor difference of color; and which can be demonstrated only on the dissection of the leaf. One of the more obvious distinctions, therefore, in the structure of the petiole and the expansion in the leaves of the gramineous tribe of plants is, that, in the petiole, the vessels run in distinct fasciculi, which are all nearly equal in point of size; whereas, in the expansion, the fasciculi differ considerably in size, the larger only being very visible on the surface. In both, there are transverse threads, which appear to connect the longitudinal bundles, and those are conspicuous even to the naked eye in the more succulent leaves, particularly in those which involve the fructification of the Mays when viewed by transmitted light.

In examining a transverse section of a portion of the expansion of the leaf of Indian Corn, containing one of the visible costæ and the interval between it and the next costæ, we immediately perceive the difference of structure in the two kinds of fasciculi. The visible costæ consists of two large spiral vessels on the same line, and a compact bundle of proper vessels on each side of the line of spirals, towards both surfaces of the leaf; while, in the interval, each fasciculus is composed of one* small spiral vessel only, surrounded with a circle of proper vessels, and placed in the heart of the substance of the leaf. But, besides these, there is another kind of fasciculi, two of which are generally observed in each

*I suspect a revision of this observation would present a different result, as to the number of the spiral vessels, and that, instead of being solitary, they are really *minor bundles*. Such, at least, I find to be the case in the leaves of *Hæmanthus coccineus* and other species. On tearing asunder one of these leaves, a little on the decline, or turning yellow, a number of *apparently* simple spiral vessels equivalent to the longitudinal ribs in quantity are really perceptible; but on completely separating those vessels, they then spontaneously divide into a considerable number of minuter spiral threads.

space between the visible costæ, connected with a peculiar cellular apparatus. These appear to be modifications of the two vascular bundles already noticed; having the same structure as the obscure or invisible fasciculous, and the accompanying compact bundle of proper vessels of the visible rib. In a section obtained by slicing the leaf, we find all these fasciculi united by transverse threads, forming rhomboidal meshes, similar to those which have been already described.

But although the arrangement of the vascular system of the leaf of Indian Corn, just described, may be taken as a specimen of that peculiar to the leaves of all the Grasses; and to those leaves of monocotyledonous plants which are petiolated, and furnished with longitudinal ribs, yet there must necessarily be many modifications of this arrangement.

In the leaves of those monocotyledonous plants, the costæ of which, instead of being longitudinal, run in *transverse parallel lines*, forming acute angles with the midrib, we find that the arrangement of the vascular frame-work resembles that of the Grasses in some circumstances; but differs from it in others. Thus the costæ are parallel to one another, and communicate by small transverse cords of vessels, so as to form meshes which are rhomboidal or square according to the angles at which these transverse cords are given off from the costæ, as in the Grasses. The petioles are, also, in general, sheathing, and many of them are furnished with ligulæ. But, in almost all of them, the peculiar cartilaginous articulation, which divide the petiole from the expansion in the Grasses, is not present; and the petiole assumes a stalk-like aspect before it reaches the expansion.

Taking the leaf of *Canna indica* (or Indian shot) as a specimen of the vascular system in this description of leaves, we perceive, on the under disk, that the midrib is much elevated near the base, and gradually diminishes in size, until it appears little more than a mere line at the apex of the leaf. The more elevated ribs are the primary vascular bundles or fasciculi; and between these are secondary fasciculi, which are less elevated. To the unassisted eye they all appear to go off from the midrib; but viewed by a magnifying lens, and with transmitted light, we perceive that all of them do not proceed directly from the fasciculi of the midrib, but that some of them are branches of the others. At the margin they all insoculate, and form, as it were one fasciculus, which, extending from the base to the apex, is the real living boundary of the leaf.

Examining more closely, and placing a slice of the petiole, cut transversely near the base of the expansion, under the microscope, with a glass of a moderate power, we perceive that the vessels are arranged in distinct fasciculi, which are nearly of the same size in the centre of the section; alternately larger and smaller near the circumference on the convex surface, or that part of the petiole which is towards the under disk of the leaf; and all small on the concave surface. The costæ are continuations of those on the concave surface of the midrib, which are curved outwards in opposite pairs, at different distances between the basis and the apex of the leaf; but the central fasciculi pass on to its point. These vascular bundles are imbedded in a cellular tissue; besides which, the petiole and midrib of this description of leaves contain peculiar pneumatic or air cells, closely resembling those which constitute a great part of the substance of aquatic plants. These internal air cavities have frequently no visible communication with the atmosphere; but in *Sagittaria* they have a connexion with the cortical pores. These may contain gasses as well as air, when unconnected with the atmosphere. In a transverse section of a small part of the expansion of the leaf, we perceive that the vascular cords run nearly in the centre between the two plates of cuticle, imbedded in an opaque, green parenchyma; and that, instead of the pneumatic apparatus of the petiole and midrib, there is a transparent layer of the large cells immediately under the cuticle of the upper disk. These pneumatic cells, however, are not present in the petiole and midrib of all leaves with transverse costæ, belonging to monocotyledonous plants, but the same general arrangement of the vascular cords, and, consequently, the same structure of the frame work, are seen in all of them.

The fasciculi in these, as in the other leaves we have examined, consist of spiral and proper vessels, or vasculoid cavities; differing, however, in the relative position of the spiral, which, here, in each fasciculus, are placed between two bundles of proper vessels.

Examining, by the same power of the microscope, a transverse section of one of the larger fasciculi of the midrib of the leaf of *Canna indica*, we find it to consist of one large, and from 3 to 6 smaller spiral vessels, arranged and relatively connected with the proper vessels, in a manner closely resembling their arrangement in the stems of White Briony.

From these remarks on the vascular system in the leaves of monocotyledonous plants, it is evident that a general character, however variously modified in many instances, pervades the whole. The bundles of vessels are distinct; they run in directions parallel to one another; and the principal fasciculi appear united by smaller transverse cords or bundles, which form meshes of a rhomboidal figure, all nearly of the same size in the same leaf.

Master and Apprentice.—At the conclusion of the war between Great Britain and the United States, Gen. Washington having taken leave of the army, addressed the late Marquis de Lafayette, who was then only 28 years of age, and had been serving in America during the revolution, as follows:—"My young friend, you have served an *apprenticeship to liberty*, now go home and *set up for yourself*." He did set up for himself and became so excellent a *boss* that his workmanship is recognised in all civilized countries on the globe.

A young farmer, having purchased a watch placed it in his fob, and strutting across the floor, says to his wife, "Where shall I drive a nail to hang my watch upon, that it may not be disturbed and broke?" "I do not know a safer place," replied his wife, "than in our *meal barrel*. I'm sure no one will go there to disturb it."—*Western Intel.*

THE BREEDER & MANAGER.

[From the New England Farmer.]

PREPARING FOOD FOR CATTLE.

Beverly, March 1, 1834.

Mr. Fessenden—*Dear Sir:* I regret as much as your correspondent, H. C., that I could not have given the result of my experiment on the subject of chopping and preparing food for cattle, without the necessity of guessing, knowing as I do the importance of exactness in all these experiments. But as an apology for adopting it in this case, I beg leave to offer the following reasons:—Notwithstanding my conviction of there being a saving in chopping and preparing hay, &c. yet I was not aware of the saving being so great, consequently I did not begin with the least idea of publishing the result. If I had, I should have weighed the quantity of hay consumed per day before commencing chopping; but also the quantity after chopping: but as I did not do this, I of course availed myself of the best evidence in my possession, and even now if practicable, I would for the satisfaction of H. C. weigh and ascertain to an ounce. But to every one who has had experience on this subject, it must be obvious that in shifting cattle from prepared food to unprepared, they will not devour it so readily nor in so great a quantity for 8 or 10 days, consequently I cannot now make an exact statement, but will here state from proof positive that in the latter case I was very nearly correct, and in the other also I think the variation would be but trifling, if any. Both might overrun from 25 to 50 pounds per day, but the proportion would be the same. But I think a calculation can be made nearly as correctly by measuring, as by weighing a mow of hay, estimating (when the hay is well stowed and settled) six hundred square feet to make a ton. This rule, I believe to be very nearly correct, and will as often overrun as fall short.

As it respects the queries of H. C. concerning the potatoes, &c. I will here give an account of the whole process. In a central part of my barn I have a room 18 by 12 feet; this is ceiled with boards, which make it tight and warm. In this room is a pump, and a pen 10 by 10 feet, which is made water tight, the hay being chopped and thrown into a heap, outside this room, early in the morning, a sufficient quantity is put into this pen to feed the whole stock once, to which is added water enough to moisten it, then meal and potatoes, when the whole is mixed with a four tined fork until every part of the hay receives its proportion of the meal and potatoes, then it is given to the cattle in baskets. This process is followed three times each day, viz. morning, noon, and about sunset. The whole of which is performed, excepting giving it to the cattle, by a man whom I hire for 8 dollars per month, not 3 as stated in your paper. This was done with not the most improved straw cutter; now I have one of Willis's improved straw cutters, the same man can perform the whole, including feeding, and the hay is cut shorter and more uniformly, which I think is quite an improvement.

In regard to chopping the potatoes I do not think it is of much consequence, excepting they are more easily and uniformly distributed amongst the hay, which is of some consequence, as when

not chopped the cattle will devour the potatoes first, when I think it is better that the whole should be eaten together. In regard to the cause of the difference in the two modes of feeding, if I should venture to give my opinion, it would not be on any particular part of the process, but on all its parts collectively; the quantity of meal or roots might be varied, for instance, if potatoes were worth more in the market in proportion to their value for feeding cattle than grain, then reduce the potatoes and increase the grain, and so vice versa; but some meal is indispensable with coarse fodder, as it is not to be supposed that neat cattle throw up and masticate a second time but a small part of the food they devour, consequently much of it passes off without imparting more than half of its nutritious substance, especially when dry, hard hay is given without other food or preparation. I think this is more perceptible in milch cows than in any other cattle; hay given in an unprepared state must of course require so great a portion of moisture to prepare it for digestion that but little is left for milk, consequently the hay devoured is often worth more than the milk we get in return; hence the importance of preparing our winter food for our cattle, and bringing it back as nearly as possible into its natural state when growing in our best patsures, by the most simple, easy, and cheapest process.—I now, Mr. Editor, hope that H. C. will accept the very imperfect explanation I have here given, and that he, or some other learned gentleman, will take up the subject and do it ample justice.

Yours, with respect,

AMOS SHELDEN.

[From Dixon's Live Stock Manager.]

Different Breeds, Varieties, and Sorts of Neat Cattle.

The great difference which prevails in most parts, in the nature of neat cattle, arises from various causes, such as their management in breeding, the properties of the pastures on which they are fed, and several other circumstances.

Foreign Breeds or Sorts.—Though much less attention is bestowed upon neat cattle in other countries than in this, there are large and good stocks of this kind in many parts where the pastures are rich and extensive, as in the Ukraine, Podolia, Calmuck Tartary, Denmark, Holland, and Brabant, some of which, are said to be of the largest size of any in Europe of the domesticated sort. In several other of those parts, they are likewise large and good, although but little regard is paid to the form and other useful qualities and properties of them. And among the Tartars, and in Abyssinia, the neat cattle have been observed to be of very extraordinary dimensions, but little or nothing is known of their nature or useful qualities. Foreign cattle of this sort are, however, seldom bred, reared, or fed, with that care and attention which is so beneficially practised in this country.

Breeds, or Sorts of England.—But though the particular circumstances and sorts of domesticated neat-cattle stock in other countries are but very imperfectly known, in this the breeds and varieties of such stock are numerous and important for their excellencies and uses; so that almost every county, or some particular part of it, has its peculiar breed, variety, or kind, which, in many instances, is peculiarly well suited to the nature of the situation of the land and its herbage: while in others there can be no doubt, but that the store-master and grazing farmer would reap much advantage, in the way of profit, by the introduction of some improved breed in the place of that which they possess, as being more adapted, in its size or other properties, to the kind of keep which is afforded, or the nature of the exposure in which it is placed.

Particular Kinds.—The more distinguished and valuable breeds or sorts are those which follow; and which have been correctly described by various writers as to their different points and particulars.

1 The old and new long-horned, or Lancashire, Dishley, and Midland breed and sorts.
2. —— Devonshire middle-horned breed and sorts.
3. The old and new short-horned and polled Yorkshire breed and sorts.
4. —— Welsh breed and sorts.
5. —— Polled Galloway, North-west Lowland, Scotch breed and sorts.
6. —— Suffolk dun breed or sort.
7. —— Highland Kiloe, or Scotch breed and sorts.
8. —— Alderney, or French breed.
9. —— Irish breed or sort.

The breeds of cattle are frequently distinguished by the names of the particular districts, counties, or places where they are the most prevalent or perfect of their kind; and it has been usual to arrange them from the nature of their horns, or other circumstances, somewhat in the following manner:

The Long-horned, or Lancashire, Breed and Kind.—This breed of neat cattle has many valuable qualities, and has undergone much improvement in different respects, so as to render it very useful in the view of the breeder and grazier in different places. It is distinguished from others, as the name implies, by the length of the horns, the thickness and firm texture of the hide, the length and closeness of the hair, the large size of the hoofs, and the course leatheriness of the neck; they are a sort of cattle which are likewise deeper made in their fore quarters, and lighter in their hind quarters, than those of other breeds in general. It is the opinion of some, that in size they are superior to the Sulfolk duns, but inferior to the short and middle horned breeds; they are narrower in their shape, and less in point of actual weight, than the short-horned, though better weighers in proportion to their size, and their beef finer grained, and more mixed and marbled. The cows give considerably less milk, though they afford more cream in proportion to the quantity. They are more varied in color than any of the other breeds, but, be the color whatever it may, they have generally a white streak along their back, which the breeders term *finched*, and mostly a white spot on the inside of the hough. The original colors were red, pied, and brindled, and the finch-backed is the strongest characteristic of the long-horned blood, as the bald face is of that of the Hereford, and the smoky face of the Pembroke. The horns of this sort of cattle are either regularly and horizontally extended to the points, or descend from the cheeks until their points meet, when the animal is sometimes styled *wheel-horned*. Occasionally the long horns assume a fanciful direction upwards, bending irregularly at the extremities; sometimes one horn takes its course up, and the other downwards.

Many contend, that the long-horned cattle are the native and original breed of this Island. "It is not easy, however," says an excellent writer on this sort of stock, "to ascertain this matter; but it is probable the long-horns have been the inhabitants of the open plain country, whilst the wild breed of the country, or perhaps the Welch and Scotch, possessed the woody, wild, and mountainous parts of the Island. However, Lancashire has, it is believed, as much right to be called the mother country for long-horned cattle as Lincolnshire has for the large long-woolled sheep; for though all or most of the cheese dairies in Cheshire, Gloucestershire, and indeed in the greatest part of the midland counties, employ a kind of long-horned cows, yet they are only a shabby mixed breed, much inferior in size and figure to the true Lancashire breed, from whence it is very probable they all originated.

Some, however, think it not improbable that the long-horned breed originated in importations of cattle from the neighboring country of Ireland; and that bulls and cows brought from that island, having been coupled with the ancient breed of the district, produced the sort of cattle known by the name of the Lancashire or long-horned, and which now occupy a large portion of the pasture lands of England. Others entertain the same opinion from the neat cattle of Ireland being called a sort of long-horned. It is not, however, unlikely that this was the native breed of the north-western parts of this country, as the Devon seems to have been of the south-western.

The long-horned cattle are also very general in the counties of Warwick, Leicester, and several other of the midland districts; and this sort of cattle are to be found in greater perfection in the county of Leicester than in the district whence they take their name, which can only be accounted for by great attention in the one instance, and equal neglect in the other. This circumstance has arisen, it is supposed, from the breeders and graziers of Leicestershire buying the best Lancashire bulls and heifers, for many years before the people of that county were well aware of the practice. The former paid more attention to that kind which was of a true mould or form and quicker feeders; while the latter contented themselves with the old-fashioned, large, big-boned kind, which are not only slower feeders, but, when fed, are not such good beef. In short, the little farmers of Lancashire, tempted by the high prices given them for their best stock, had lost their valuable breed before they were sensible of it.

It is stated that this breed is understood by graziers to be in general rather slow feeders, except that particular kind selected and improved by Mr. Bakewell, which are said to require less food than the others, to become remarkably fat in a short space of time, and to lay their fat upon the most valuable parts, but to have little tallow in them when killed; and when used in the dairy, to give but little milk. This kind also differs from the rest of the long-horned cattle, in having

very fine, clean, small bones in their legs, and also thinner hides. They are a middle-sized, round-carcased, good-looking sort of cattle. The account that has been given of the

Improved Sort,—Which originated with the celebrated breeder just noticed, is, that many years before this period there had been selected from Lancashire and Westmoreland a number of the best-shaped cows; and that certain descendants of these were afterwards purchased on the banks of the Trent, and introduced into Warwickshire by Mr. Webster of Canley, in that county, whence originated the celebrated Canley breed. The previous breed of the county were, it is supposed, long-horned, but far inferior to those introduced by Mr. Webster. The above-noted breeder commenced his labors in this improvement with the Canley cows and a bull from Westmoreland, called Twopenny. After breeding in the same line with this stock through a great number of descents, always selecting individuals of the roundest form and smallest bone, he attained the desired success in those respects, and raised that variety which has been since so celebrated for aptitude to acquire external fat. But in the achievement of this end he seems to have in some measure sacrificed the quality of great milking, and rendered the animals less certain in the faculty of procreation. Hence this variety of long-horns is calculated principally for the purpose of the grazier, the original breed retaining its superiority in the dairy.

"There seems to be no opinion formed of any specific difference of quality between the flesh of these and the short-horned cattle; but if we are to judge by analogy from the hides and milk, we may reasonably attribute a more nutritious and substantial quality to the flesh of the former. It has been the custom to deem any presumed specific difference in the quality of the flesh of those animals on which we feed a groundless refinement, and also to attribute any difference to the keep on which they are fattened. Such an idea, however, seems to be erroneous. No keep will equalize the milk and hides, probably not the flesh, of distinct breeds; but we possess an unerring standard by which to determine the former, whilst taste alone decides concerning the latter."

It is noticed, too, that the size of the improved long-horned stock of the midland counties is considerable, as appears by a four-year old steer of Mr. Prinsep's breed, killed some years since, the weight of which was 248 stone, fourteen pounds to the stone, exclusive of 25 stone of fat. The hide weighed 177lbs. It must be kept in mind too, that there is a mellowness and ductility in the thick hides of such well-bred stock which much enhances their value at the leather market.

The reality of this improvement of neat cattle for the grazier's purpose should, it is remarked, be indubitable, considering the vast prices given for them in the midland grazing districts, higher than in any other; even after making considerable allowance for the suspicion of mere nominal prices. Mr. Bakewell also, probably, first set the example of letting bulls and rams at high prices, which has since proved so beneficial to the country before mentioned.

It is further observed, that Mr. Fowler, of Rolwright, in Oxfordshire, was the earliest and most successful follower in this improvement: that after beginning with two Canley Cows, for which he engaged the bull Twopenny, the produce of which was two cows; and then getting another improved bull from the above excellent breeder, he thenceforth bred entirely from his own stock, the success of which was fully shown in the high prices obtained for the cattle at his well-known sale by auction.

The beautiful cattle at first produced were long and fine in the horns, small in the heads, clean in the throats, the backs straight and broad, quarters wide, light in the bellies and offals, mild, gentle, and quiet in their tempers, from early management, and well disposed to fatten on little food, but not great milkers. For beauty, exactness of form in their parts, and disposition to become fat, they are not to be excelled by any. The improvements made in them since have rendered them still stronger and deeper in the carcase, finer boned, finer in the necks, throats, and bosoms, and the backs more straight, wide, and loaded with flesh; the rumps wide, thick, and fleshy, on the points, having occasionally a large portion of fat on them, and near the root of the tails, the flanks feeling thick and fleshy, even when only in store order, and handling every where loose and mellow. It was at one time supposed that this breed could only be produced by the best keep; but the contrary is now known to be the case, and it is believed, that in general, such improved cattle will endure less difficulty from hunger, and go on better with common food, than those of a less valuable kind. It has indeed been proved that they keep themselves in good order with less food than any other sort of the same weight. It is supposed that those of a dark red, deep liver colour, or black, with tan-coloured sides, are the hardiest, and have the best constitutions, being capable of enduring the severest weather, of performing the most work, of living to the greatest age, and of becoming fat on such food as would starve those of colors which shew more weakness.

Craven, in Yorkshire, is famed for a superior variety of this breed of cattle, from which probably the Lancashire cows were originally drawn. Good middling beasts of this sort should be well proportioned in their length, depth, and thickness, wide, especially on the rump, with short legs, and thin horns spreading, the color red or pied, as above, the hide sleek and loose, of a middling thickness, and the weight when fat from nine to twelve score the quarter.

Though this improved breed of long-horned cattle has chiefly been valued for the carcase, which has been the grand object of the breeders, as affording more meat, there are many excellent milkers and dairy cows to be met with among the cattle stock of this sort in different places. The largest, best, and most valuable at present is in the hands of Mr. Prinsep, a most distinguished breeder in the above district; but valuable improved stock of this sort are to be met with in many other places in the same neighborhood. They have a very great disposition to take on flesh and fat, and mostly come to their proof under suitable keep at so early a period as three or four years in the cows and oxen. They probably pay better for the length of keep than any other breed or variety whatever. The young cows are, however, apt to be long dry between having calves. The cattle of this very improved sort produce nearly one third more than others by their hides when killed, and they cut up better and with more profit from their finer and fuller shape in certain parts, which are properties that are well worth the notice of breeders and graziers. Three convenient sizes of these improved cattle prevail in the native district, a large, middle, and smaller sort, each of which have peculiar advantages in certain cases.

These cattle are remarkable for a greater length of carcase in proportion to their height than most others, and being generally variegated in colour, they have a much finer appearance than many other sorts, whose uniformity of colour is tiresome and unpleasant to the eye.

MISCELLANEOUS.

Disease in the feet of Sheep.—As the persons employed on the farm of *Anthony Anderson*, Esq. at Dorchester Bridge, were shearing his sheep, on Tuesday, the shepherd called his attention to a small orifice bust, at the separation of the foot of one of these animals, and told him that it was a disease "called the worm in the foot," which Anderson, though an experienced farmer informs us he had never before seen, or indeed heard of. The Shepherd advised that the wound should be pared down so as to get at the head, and with a strong needle he passed some doubles of thread through it, and extracted what he called the worm. It appears to be a *Hydatid* or bladder like skin containing a fluid not unlike starch, and a small portion of a hairy substance, resembling the short wool on the legs of a sheep. Mr. A. extracted one such worm from each foot all similarly placed at the articulation of the hoofs; and found five or six of his sheep afflicted in like manner; after extracting the cause of the disease, whatever name be applied to it, he filled the cavity with pepper and salt.—*Quebec paper.*

On Wednesday morning last, the point of some sharp instrument resembling that of a needle, was observed, by Mr. Wm. Johnston, of this town, protruding from the breast of one of his children, about 14 months old. He applied a pair of tweezers to it, and, by the exertion of considerable force, pulled out a needle of nearly two inches in length. The child had complained of much pain for three or four weeks past, the result, no doubt, of the movement of the needle from the throat or stomach towards the point at which it was discovered—having, in all probability, been swallowed a few weeks previous.—*Hagerstown Torch Light.*

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BALTIMORE PRODUCE MARKET.

☞ *These Prices are carefully corrected every* MONDAY.

	PER.	FROM	TO
BRANDY, Apple,	gallon.	$0 27	$—
Peach,	"	75	—
BEANS, white field,	bushel.	2 00	—
BEEF, on the hoof,	100lbs.	5 50	6 00
CORN, yellow,	bushel.	66	67
White,	"	66	67
COTTON, Virginia,	pound.	10	13
North Carolina,	"	11	13
Upland,	"	13	15
FEATHERS,	pound.	—	37
FLAXSEED,	bushel.	1 00	1 25
FLOUR—Best white wheat family,	barrel.	6 50	7 00
Do. do. baker's	"	5 75	6 25
Do. do. Superfine,	"	5 00	5 25
Super Howard street,	"	5 12	5 25
" " wagon price,	"	5 00	— —
City Mills, extra,	"	5 00	5 75
Do.	"	5 12	5 25
Susquehanna,	"	5 25	—
Rye,	"	3 37	—
GRASS SEEDS, red Clover,	bushel.	—	4 50
Timothy (herds of the north)	"	3 50	—
Orchard,	"	3 00	—
Tall meadow Oat,	"	2 50	—
Herds, or red top,	"	1 25	—
HAY, in bulk,	ton.	14 00	15 00
Pressed,	100 lbs	—	90
HEMP, country, dew rotted,	pound.	6	7
" water rotted,	"	7	8
LIME,	bushel.	30	35
MUSTARD SEED, Foreign,	"	4 50	5 00
Domestic,	"	5 00	—
OATS,	"	38	40
OIL, linseed,	gallon.	—	90
Castor	"	1 70	1 80
PEAS, red eye,	bushel.	—	—
Black eye,	"	— —	1 00
Lady,	"	—	—
PLASTER PARIS, in the stone,	ton.	3 00	—
Ground,	barrel.	1 37	—
PALMA CHRISTA BEAN,	bushel.	2 00	—
RAGS,	pound.	3	4
RYE,	bushel.	71	— —
TOBACCO, crop, common,	100 lbs	3 50	5 00
" brown and red,	"	4 50	6 00
" fine red,	"	6 00	8 00
" wrappery, suitable for segars,	"	6 00	12 00
" yellow and red,	"	8 00	12 00
" yellow,	"	13 00	17 00
" fine yellow,	"	15 00	22 00
Seconds, as in quality,	"	4 00	5 00
" ground leaf,	"	5 00	9 00
Virginia,	"	4 00	—
Rappahannock,	"	3 00	4 00
Kentucky,	"	4 00	8 00
WHEAT, white,	bushel.	1 20	—
Red,	"	1 08	1 12
WHISKEY, 1st pf. in bbls	gallon.	28	29
" in hhds	"	26	—
" wagon price,	"	—	—
WAGON FREIGHTS, to Pittsburgh,	100 lbs	1 00	—
To Wheeling,	"	1 25	—
		washed.	*unwash*
WOOL, Prime & Saxon Fleeces,	pound.	50 *to* 60	24 *to* 26
Full Merino,	"	40 50	20 24
Three fourths Merino,	"	33 40	22 24
One half do	"	28 33	21 22
Common & one fourth Meri.	"	25 28	18 20
Pulled,	"	28 31	18 20

BALTIMORE PROVISION MARKET.

	PER.	FROM.	TO.
APPLES,	peck.	$0 25	$0 37
BACON, hams,	pound.	11	—
Shoulders,	"	—	9
Middlings,	"	—	9
BUTTER, printed, in lbs. & half lbs.	"	25	—
Roll,	"	11	18
CIDER,	barrel.	—	—
CALVES, three to six weeks old	each.	4 00	8 00
COWS, new milch,	"	15 00	27 00
Dry,	"	9 00	12 00
CORN MEAL, for family use,	100lbs.	1 50	1 56
CHOP RYE,	"	1 56	1 62
EGGS,	dozen.	9	—
FISH, Shad, trimmed	—	—	—
" salted,	barrel.	6 37	—
Herrings, salted, No. 1 & 2,	"	3 87	4 00
Mackerel, No. 1, 2 & 3,	"	3 50	6 25
Cod, salted,	cwt.	—	2 75
LAMBS, alive,	each.	1 25	2 00
Slaughtered,	quart'r	31	50
LARD,	pound.	8	—
ONIONS,	bushel.	—	87
POULTRY, Fowls,	dozen.	—	—
Chickens,	"	2 25	2 75
Ducks,	"	—	3 25
POTATOES, Irish,	bushel.	—	62
New,	peck.	12	25
VEAL, fore quarters,	pound.	6	—
Hind do.	"	8	—

ADVERTISEMENTS.

SKINLESS OATS.

A VERY small quantity of this celebrated new article has been obtained, at an enormous expense, and will be disposed of at this Establishment, at 50 cents per ounce. But as my stock of Gama Grass Seed is, for the present, exhausted, I shall substitute this article as a return, to all subscribers to the Farmer & Gardener, on payment of their subscription. (See terms.)

I. I. HITCHCOCK,
July 29. Amer. Far. Estab.

☞ See an account of this article on the first page of this number.

A SUPERIOR JACK FOR SALE.

FOR SALE, by a farmer in this state, a splendid Maltese Jack, *first rate in every respect.* He is *nearly* 14½ hands high!—Eight years old last spring; quick in performance, and *efficient* to an unusal degree, 31 mares out of 34 in one instance, and in another 8 out of 9 mares belonging to one farmer proving with foal by him in 1833. He is probably in every respect one of the best Jacks ever imported into the United States. Price $1000. Address

I. I. HITCHCOCK,
jy 29 Amer. Farmer Establishment.

WESTPHALIA GEESE.

A FEW pairs of these unrivalled Geese for sale at this establishment. They were hatched in April last, and are *now* considerably heavier than old geese of the common breed.

These geese are of the purest white, with bills, legs and eyes of a bright scarlet color. Geese of this breed have attained the enormous weight of 20 pounds, and those now offered for sale are for their age equal to any both in beauty and size that we have ever seen—Price $5, a pair. They can be sent safely in coops or crates any distance. july 29

TURNIP SPINACH & CABBAGE SEED.

A FULL supply of these seeds of several of the best varieties for summer and fall sowing, now on hand and for sale by

I. I. HITCHCOCK,
july 1 Amer. Farm. Estab.

NEW LEICESTER BUCKS.

I AM authorised to sell several fine Bucks of the Leicester or improved Bakewell breed of Sheep, and one do of the Cotswold breed, at from $75 to $100 each. Who will have one or more? I. I. HITCHCOCK,
July 15. American Farmer Establishment.

SUBSCRIBERS can have their volumes of the AMERICAN FARMER neatly half bound and lettered at this establishment, at 75 cents a volume. Most of the Nos. can also be had at 10 cents each, to complete files.

GRAY OR GAZE HOUNDS.

LAST September, I received from the President of the United States, for the breeding farm of this Establishment, a pair of these very beautiful and powerful animals, which had been sent out to him from Holland, by the American Consul there, and in vol. 15, of the American Farmer, page 233, I published the letter accompanying the very acceptable present. I have now the satisfaction to offer for sale four (female) puppies—their issue. They will be ready for delivery in all the month of July. Price $20 each.

I. I. HITCHCOCK,
American Farmer Establishment.

LARGE WHITE FLAT TURNIP SEED, &c.

JUST RECEIVED,

550 LBS. large White Flat, and Red Top TURNIP SEED, (growth 1834,) raised at the Clairmount Nurseries, by R. S. Senr. from the finest and best shaped roots.—The perfect success of Turnip crops produced from this seed for the last eight years, and the general satisfaction expressed by those who have tried it, added to the increased annual demand for the article from Eastern Seedsmen and others, is sufficient proof of its superior quality.

It is recommended "to sow the seed about the 10th August, on new cleared land, or well tilled clay or loam—quantity of seed required to crop one acre of ground ¾ to 1½ lb.; if the latter quantity is sown it will be necessary to cross the plants with a harrow, after which follow with hoes, leaving the plants about 12 inches apart." For further information relative to preparation of seed, cultivation, &c. see R. Sinclair's remarks on Turnip crops in the American Farmer, volume 8, page 138. Price $1 per lb. and a liberal discount to those who purchase to sell again.

Also, early round Dutch Turnip Seed, Norfolk or large white, white Tankard, yellow Bullock, Ruta Baga, and Dale's new Hybrid Turnip Seeds, at 75 cts. to $2 per lb.

Pickling Cucumber Seed of best sorts, Endive, Brussels Sprouts. Lettuce of various sorts, among which are brown Dutch; large white Cabbage and Cilicia—the three most esteemed sorts; Hybrid or Yellow Turnip Radish, and blue curled Greens, a superior sort for fall sowing, raised from selected plants.

500 lbs. prime early Cabbage Seed, (growth 1834) raised near London, consisting principally of early and large York, early George, Bullock's heart, Battersea and Sugar loaf. The vegetative qualities of those seeds have been fully tested in hot beds prepared for the purpose, and to insure certain success and prevent disappointment to those who purchase, plants of each of the above have been transplanted, and are now flourishing, which will enable a true description to be given of their quality, appearance, &c. before the 1st of September, which is the usual time of sowing.

R. SINCLAIR, Jr. at
SINCLAIR & MOORE'S
July 22. Maryland Agricultural Repository.

IMPROVED DURHAM SHORT HORN BULLS—CHEAP.

I AM requested by a gentleman of high character as an agriculturist, in a neighboring state, to offer for sale several Bulls of his, of which he has yet given me no other description than the following, viz: "My stock is of the Short Horn Durham breed, and derived from the best and purest sources, imported recently." He offers Bulls two years old, one year old, and of the last spring, at the following prices respectively: $200, $150, $100.—If, as I presume from the character of the gentleman, his stock is of a high order, and if he can, as I also presume, furnish pedigrees of pure blood, then is the present a rare opportunity to procure fine Bulls, at more moderate prices than I have hitherto been able to offer them. I will ascertain further particulars in regard to this stock, and be able shortly to speak definitely as to its character. In the mean time, should any gentleman want one or more of these Bulls, he may rely entirely on receiving through this Establishment no other than such as shall be represented and proved too.

Address I. I. HITCHCOCK,
July 15. American Farmer Establishment.

DALE'S NEW HYBRID TURNIP.

THE subscriber now offers to the agriculturists a new and decidedly superior variety of Turnip, originated by R. Dale, esq. an intelligent farmer, near Edinburgh, Scotland; it was obtained by unwearied attention in crossing the Swedish or Ruta Baga Turnip; it is superior in size and flavor to the Ruta Baga; is closer and finer in the texture; it is rapid in its growth as the White Flat Turnip. In fact, it includes the great desideratum in the selection of a proper variety of the Turnip which is to obtain the greatest possible weight at a given expense of manure. This variety seems to be more adapted to this end than any other sort introduced; it will be found superior in quality to any of the White Field Turnips, and keeps longer than any of them, and very near as long as the Ruta Baga—the color is yellow—the shape oblong. Price 25 cents per ounce. The season for sowing is at hand.

I. I. HITCHCOCK
10 June Amer. Farm. Estab.

Printed by SANDS & NEILSON, South East corner of Calvert and Market-streets.

THE FARMER & GARDENER;

AND LIVE-STOCK BREEDER & MANAGER.

CONDUCTED BY I. IRVINE HITCHCOCK, AND ISSUED EVERY TUESDAY FROM THE AMERICAN FARMER ESTABLISHMENT, AT $5 PER ANNUM, IN ADVANCE.

No. 14. **BALTIMORE, AUGUST 5, 1834.** **Vol. I.**

☞This publication is the *successor* of the late
AMERICAN FARMER,
(which is discontinued,) and is published at the same office, at five dollars per year, payable in advance.
☞When this is done, 50 cents worth of any kind of seeds on hand will be delivered or sent to the order of the subscriber with his receipt.

American Farmer Establishment.

BALTIMORE: TUESDAY, AUGUST 5, 1834.

SILK.—In a former number, we considered a method which would be a proper one to be pursued by a person, who should attempt to convert his barren waste into an orchard of mulberries, for the purpose of raising silk. Many different methods of planting might be adopted, according to the intentions of the cultivator. The one, we formerly considered, supposed the land to be so poor as to need manure, and of considerable extent. In such a case, where manure was scarce, the plan of placing the trees at the distance of 16 feet apart, and manuring round them, would enable the cultivator to occupy his intended space of land at little expense for trees; and by cultivating and manuring the interstices between the rows, the land would become in a favorable condition, and eventually occupied by the spreading from the roots, and the ground filled up with the trees, in as economical a manner as an orchard of such an extent could be obtained.

It has been computed by those, who have had most experience in the multicaulis, that an acre of land well set with this vegetable, would produce from 50 to 75 lbs. of merchantable silk, and some have supposed, as much as 100 lbs. to the acre might be obtained. This silk is of ready sale at $4 to $5,50 per lb. If we take the lowest estimate that we have mentioned, of 50 lbs. at $4 per lb. it will amount to $200 per acre: but, that we may be quite within the range of probability, and make sufficient allowance for all incapacity and slovenliness in management, let us deduct one half of that, and suppose the product to be 25 lbs. of silk, or $100 per acre. This would be no small increase in the value of that land, which, in its present state, is absolutely valueless, and a waste of labor to occupy it in any way.

It is the practice of the Chinese landholders, to have their land planted with the mulberry, and rent it out to the poorer class, who make the silk to the shares. One half goes to the owner of the land, and the other to be retained by the laborer. What owner of a 1000 acres of poor land in this state, or to the south of us, would not find it to his advantage to set off fifty acres of land, and lease it to a tenant for a long term of years, to be occupied in this way? The first few years it might be without rent, but on the condition that the tenant propagate the mulberry tree; and afterwards to give half the silk. Admitting it produced but one half the amount of our lowest estimate, it would yield $25 per acre annually to the owner of the land, without his having trouble or expense. That land which is now offering for sale at 5 or $6 per acre, without a purchaser, if set with the multicaulis, would, at the low estimate we have made, which is but one eighth of what might be done, and is done, be to the owner as good as $300 per acre.

If the large land holders would set off a part of their land in this way, and offer it to tenants at a favorable rate, it would be the means of collecting around them an independent class of laboring men, who would give a value to their whole possessions, and confer a lasting benefit on the community at large.

But if such decisive measures should be considered as requiring too great a departure from old habits, let every one who has land in waste and numerous hands on their place, make a beginning; procure a few trees, and set off an acre of land, for a truck patch, as it is called; plant the trees in it, and give the servants all the silk they will make in five years. There would be no doubt of its rapid increase in such a case, and not an hour of labor lost to the master. It is a common thing to see the slave have the best and fattest hog on the farm—when he has a separate garden, his cabbage heads are larger and firmer than are to be found in the plantation garden—and if the mulberry trees were entrusted to his care in a way in which his interest was effected by success, they too would succeed without a doubt, and the master nothing the worse for it. It is a very common thing to hear the master say he wishes his negroes were in Africa, and he had the money for them. If any are really desirous of such a measure, here is presented a way in which the slave might soon pay his price, and leave his master doubly enriched; first, by the absence of the slave, and secondly, by the increased value of his estate.

MARYLAND HORTICULTURAL SOCIETY.

SATURDAY, Aug. 2.

Mr. Robert Dore presented four egg plants, very fine for the season.

Mrs. B. I. Cohen presented specimens of a new variety of Plum, of most delicious flavor.

Mr. Waters presented three varieties of Plums, fine and perfect.

Mrs. B. I. Cohen exhibited a plant in full flower, of the Aloe Carina, a fine specimen, and the first that has flowered in this vicinity.

Mr. G. B. Smith presented specimens of the Lady Washington, and a new seedling double pink Dahlia; also Oleander Splendens, and double white Oleander.

Mr. John Feast exhibited specimens of Ruellia formosa, Orchis purpurea, Franklin Tea Rose, Seedling Ilibiscus, Escholtzia Californica, &c.

Mr. Evan Thomas exhibited a fine plant of Ixora Coccinia.

Mrs. Emory presented specimens of Centaurea Americana, Oleander Splendens, Comelina Cerulea, Crepis barbata, Lonicera Caprifolia, yellow double Flowering Pomegranate, Sophora occidentalis, &c.

METHOD OF DESTROYING MOLES IN MEADOWS AND GARDENS.

Collect earth worms, kill them, and mix them up with the powder of Nux Vomica. After the mixture has remained in a heap for twenty-four hours, take the worms and place one or more of them here and there in the holes or tracks of the moles.—The desired effect is said to be a certain result.

A man in Salem, Washington county, Ohio, engaged in hewing out a mill stone, having broke off the upper surface of the stone, three inches and a half, discovered several holes in a straight line across the stone, having every appearance of being drilled for the purpose of setting wedges to break the stone. In one of the holes was part of a wedge. Two thin plates of iron had first been put into the hole, and the wedge was driven in between them, and was broken off. The plates and the wedge were in a perfect state of preservation, having rusted but little. These holes and the wedge were 3 inches and a half from the surface, the stone apparently having grown over them. The stone was perfectly solid, excepting these holes, and the upper surface was of the same nature and hardness with the other part of the stone. The stone was covered by two or three feet of earth, probably washed from the hill above.

THE FARMER.

To Preserve Potatoes and Turnips through Winter.

To the Editor of the Farmer & Gardener:

In compliance with thy request of the 8th inst. I will describe my practice of preserving potatoes and turnips through the winter, for the benefit of thy southern correspondent, H. C. Hoyt, and others.

I have found but little difficulty in keeping them, in a sound state, in the latitude of Baltimore, and I think they could also be preserved in North Carolina, by managing as follows:—

Dig the potatoes after there has been frost enough to kill the vines. One day's sun will dry them sufficiently for storing, a longer time of exposure would make them rancid. Select a place for storing the roots, on a dry, north hill side, sufficiently elevated to preserve them from the injurious effects of soaking rains. Dig the holes for receiving them from one to three feet deep, according to the soil, and not more than four feet wide, else it will contain too large a bulk for preserving them without fermentation. The hole or pit may be made of any convenient length which may be desired—then fill in the potatoes, and raise the pile above ground as long as they will lie on the pile, and cover them one or two inches thick with dry leaves, wheat straw, or chaff; then cover the hole regularly with the surrounding earth, enough to keep out the frost—here (Baltimore) it requires 18 inches of earth, especially on the north side of the heap. Let it be well packed, and heaped to a point or ridge and smoothly pressed with a shovel, so as to exclude the water from soaking in. If the heap be surrounded by a small drain, at a little distance from the pile, so as to carry off the rain, it would be an additional security against the injurious effects of dampness.

Turnips may be saved in the same manner, with the additional precaution of forming a vent at the top of each hole, or one at each end of a long pit, if that form is adopted; which may be in the following way.

After the straw covering is on, fix a piece of wood about three inches diameter, and eighteen inches or two feet long, on the top of the hole, and then pile on the earth around it, and pack it close, the thickness intended. By working the piece of wood, it may be withdrawn, leaving a smooth hole through the covering to the roots. In order to keep out the rain, &c. lay around the hole three half bricks, or stones, to support a large sod, cut from a firm green sward, which will cover the hole and the bricks or stone, and will preserve the opening to pass off the moisture from the turnips, which is very injurious to their preservation. Smaller holes or sides for the turnips will be safer, and perhaps a mixture of dry sand would be found useful, as it has been found valuable in saving beets, &c.

Thy Friend,
ROBERT SINCLAIR.

FARMERS' LYCEUMS.

Mr. Editor:—Some of the most social and instructive evenings I have ever spent, were at weekly meetings of twenty or thirty plain, practical farmers, held at their own houses, during a few years since. At every meeting some subject of agriculture or domestic economy was selected for conversation and remark at the next meeting. Two Secretaries, appointed for the purpose, recorded the substance of the remarks, which were given orally, and kept on file all written communications.

In the course of one season, two volumes of manuscript were formed from the remarks made, which were, of course, almost wholly of a practical, experimental character. These volumes furnished many articles, which were of the most useful, because of the most practical, character. I have also been interested in State and County Agricultural Societies, but never received one half the entertainment or instruction from all others united, as from these social informal meetings among a few neighbors, and of such a character as could be easily sustained in town, or neighborhood in the country.

Such meetings among farmers receive great additional interest and value from their connection with general Lyceums; embracing, not only farmers, but mechanics, merchants, and those engaged in literary professions. These different classes become mutually beneficial to each other. The clergymen, physicians and teachers are no less benefitted by the farmers' practical knowledge, than he is by their theoretical sciences.

Museums, or collections of natural and artificial productions, together with books on scientific and practical agriculture, and treatises on general science, would be of the utmost service, in rendering the social meetings of farmers a Farmers' Lyceum.

Such being the fact, every farmer who consults his own pleasure or profit, must see the importance, and the entire feasibility of his lending his aid to the general establishment of Lyceums in all the counties, towns and neighborhoods in our Union—for, if he aids in establishing or sustaining one in his own county or neighborhood, he he will at least set an example worthy of being followed in every other county and neighborhood in the states. AGRICOLA.

[From Bridgman's Young Gardener's Assistant.]

August.—The planting season being nearly over, now is the time to hoe around the plants and clear the ground of weeds and stubble. Dig or plough vacant ground ready for fall Turnips, Spinach, Shallot, Fetticus, &c. As the ground for the latter crops may require manure, it will be greatly improved if ploughed before the manure is drawn on, which should be afterwards spread and ploughed under.

Plant Beans for picklers; sow Cabbage seed for Collards; earth up Cardoons; do. Celery; sow Corn Salads or Fetticus seed; the early kinds of Cucumber may produce picklers if planted early in this month; transplant Endive and prepare to blanch the early plantings; Peas may be planted thus late if desired; sow black Radish seed; prepare for planting Shallots by the end of the month; sow Turnip seed for full crops; attend to such herbs as were not gathered last month, cut off and dry Sage, and other late herbs. Hops will be ripe this month; choose a dry season for gathering them and attend to them as directed; this is a good season for preparing to make Mushroom beds, in close sheds, cellars or pits; if the materials be collected this month, indigenous spawn may be collected next, but those that can procure spawn may make the beds at any time, or they may pursue Mr. Nichols' plan; continue to gather seeds of all kinds as they ripen, and clear the ground ready for late crops of Spinach, &c.

If the weather be dry, such flowering shrubs as were planted in the spring should be watered occasionally. Cut down all decayed stalks as soon as the seeds be gathered, and pull up annuals as they cease to flower. Mow grass walks and lawns, and attend to the edgings, &c. The Grapes against south walls will now be maturing fast; look them over frequently, and stop the shoots that require it. If the weather be dry, trees planted in the spring preceding, should be watered, and such other trees as may be in very light ground.

Wool.—The business in the sale of wool has begun to move. There has been something doing in this article the last week, at the prices quoted in our Price Current, and the demand will be likely to increase for some time to come.

We copy the following from the Northampton, (Mass.) Courier, which may be found of interest to any of our readers who may have turned their attention to this branch of rural economy:

WOOL.—The unsettled and fluctating state of the Wool market, occasions some little solicitude among the growers. Wool at present prices is twelve to fifteen per cent. less than last year, and the question now is whether prices will rise or fall the ensuing autumn.—Some of the Wool growers are confident that it will rise, and so hold on upon their stock, while others, less sanguine, are selling their fleeces, unwilling to keep it on hand, trusting to future exigencies. The case seems to be this. The manfacturers have unsold a large amount of cloths, the prices of which have fallen materially, and even at a great reduction they are unable now to sell them.—They all have remaining considerable lots of wool, and are determined to purchase only to supply urging necessities. They believe that large quantities of the new clip will early be thrown into the market, and that the wants of individuals will require it to be sold.—It is conceded on all hands, that an unusual amount of wool is cut this year, and that the quantity of cloth manufactuered is much less than in ordinary times. The manufacture will not be extended until the sale of cloth is much increased, and consequently, the demand for wool will not be greatly extended at present.

Manufacturers inform us that prices as they now are, but poorly repay the actual expenses of the fabric, and that wool must fall before they shall be disposed to extend their business. The disposition now is to curtail it, as they are working at no profit. One of these gentlemen informed us the other day that he purchased Ohio wool in the city at much less than the article can be produced for in this vicinity. We know it is hard for the toil of the wool growers to be thus

poorly rewarded. But it comes from the necessity of the times, that they must suffer as others suffer.—They are not alone in a ruinous depreciation of their industry. Beef Cattle has fallen, Grain has fallen, and Wool of necessity has fallen also. If there was any evidence, either in the signs of the times or the prices of manufactured articles, either at home or abroad, that wool would materially rise, we should most cheerfully say so. But it is not wise to hold out allurements which are both false and deception to our pecuniary interests. We therefore would seasonably caution the wool grower against a *too confident* reliance upon the expectation of better prices, so much so as to allow favorable opportunities for the sale of his commodity to pass unimproved.

Since writing the above, a wool grower from the hill towns passed by with his new clip for the manufacturers in Worcester county. He informed us he was paid 50 cents, having sold the same last year for 70! His remark was, that it was wise for him to sell while there was a chance, before the market was glutted with Ohio wool. He might not have even another *such* opportunity.

On the principal varieties of the Potato cultivated in Great Britain.

By Mr. Charles Lawson.

The results of the numerous experiments already on record, shewing the superiority of some kinds of potatoes over others, induced me to pay some attention to the subject, and to collect characteristic specimens of all the varieties which I could obtain, with the view of submitting them to comparative investigation.

The mere names applied to the varieties in cultivation afford little useful information, the same sorts being frequently called by different names in different districts; and in presenting a tabular view of the principal varieties, I have been careful to note their distinctive qualities.

That new varieties may be produced by seed *ad infinitum* is well known; and that those already in existence are numerous, is in some measure demonstrated by the list which I have prepared. These varieties are in general distinguishable by their form and color, the appearance of the eyes, or some peculiarity in their growth.

But if the permanency of varieties cannot be depended upon, the utility of any comparison of their merits would be greatly lessened. This permanency has frequently been disputed, and it has been argued, that as the tuberous roots of the potato are lateral productions, like the buds of trees, and productive of plants exactly resembling the parent, they must be liable to hereditary diseases, and so become ultimately unhealthy. By some, fourteen years are stated as the period of existence of a variety of potato; and in support of this opinion, the appearance of the curl about that period is adduced as an evidence of decay.

This doctrine, however, has always appeared to me opposed to analogy, as shewn in the cultivation of plants generally; and even although Mr. Knight's doctrine as to the apple should be correct, it does not follow that production by extension, and production by means of tubers, are the same.

The latter I consider as equally fitted to produce a progeny distinct from the parents as the generation by seeds.

The tubers, however, having no source of improvement after they have arrived at maturity, and being liable like all plants to injuries, may contract hereditary diseases, which, however, might have been prevented by proper attention. I believe that any variety of potato, cultivated by means of tubers, may be continued unchanged to any length of time, provided due care be employed in its culture.

No doubt extensive experience has proved, that the cultivation of any particular variety of potato, for a continued succession of crops, in the same soil and situation, injures the quality, and diminishes the quantity of the produce. But this is a law applicable to all cultivated plants, and only shews that attention to the change of circumstances and to rotation is also necessary in the cultivation of the potato.

Nothing appears to me to resemble the growth of the potato under ground, so much as the strawberry does above ground. In the former, a shoot springs from the root of the plant, after the leaves are expanded in the air to oxygenate the nutritious fluids, and so forms a tuber; and in the latter, the runner performs the same office, and deposits a new plant. The most scrupulous as to the permanency of varieties will admit, that those of the potato are at least as enduring as those of the strawberry. Now, by attention to the numerous varieties of this plant, we have been enabled to avail ourselves of every benefit arising from an accurate discrimination of the sorts. In like manner, attention to the potato may enable us to obtain similar, nay more important benefits.

What is wanted regarding the potato is,

1. The fixed application of a particular name to each of the more important varieties;

2. The determination of those varieties the cultivation of which ought to be abandoned;

3. The indication of those more peculiarly adapted to particular soils, situations, and purposes;

4. The knowledge of those to which we might look with most certainty as improvable by crossing.

With these views I have prepared the following descriptive table of the varieties which I had an opportunity of growing and examining this season.

There can be no doubt that a change of soil, climate and treatment, may alter the qualities of the tubers in a considerable degree; but it appears to me not less true, that no circumstances will very materially change the general tendency to being early or late, the general form, the colour, or the general habit of growth.

I have therefore noted these particulars, as affording collectively discriminative characters of sufficient value.

The tubers are composed of water, starch, fibrous matter, mucilage, and saline extract. It is probable that the mealiness depends either upon a due proportion of these principles, or upon the mucilage of some being more or less coagulable by heat than that of others; or it may occasionally be affected by the acidity of the spring-water in which they are boiled. However this may be, I have noted the quality of the different varieties as to their being mealy or waxy.

The comparative liability to disease is the next circumstance attended to. The mode of growth of the stems, whether inclined to be erect or drooping, has also been noted.

The flavor, I apprehend, depends very materially on the increased action of the vital functions of the leaves, and does not admit of being very intelligibly expressed.

The degree of productiveness is a matter of great importance, but can be expressed only by very general and rather vague terms.

Although the same variety of potato, cultivated under different circumstances, may yield different proportions of its component parts, yet as a comparative view of that ingredient of most importance in its application as food, namely the starch, from the different varieties cultivated under the same circumstances, will afford a good criterion as to their relative value, I have ascertained this by rasping eight ounces of tuber of each variety, which being immediately mixed with a sufficient quantity of water, was poured upon a fine hair-sieve, through which the water passed, carrying with it the white precipitate. The weight of this sediment deposited from the filtrated fluid, after being thoroughly dried, is marked in the table. In those cases where the difference was great, to prevent the possibility of mistake, I made second trials. I think it likely that had the macerated potato lain for a day, and been frequently stirred, the quantity of starch would have been greater; but as the whole were done exactly in the same way, the products answer equally well, as affording a comparative view.

In the specimens of starch produced by the different varieties, a considerable difference was perceptible, both as to color and texture; and on trying the specific gravity of twenty specimens, I found it to vary from 1 to 8 per cent.

The fibre of 8 oz. of tuber in twenty varieties, when dried, weighed from 180 to 216 grains troy.

The specific gravity of the tubers themselves is nearly in the same ratio as that of the starch, as above indicated. A cubic inch of twenty of the varieties which I have tried weighed from 295 to 312 grains. The comparison, however, requires to be made with greater accuracy than I can accomplish at present, in order to discover whether Mr. Knight's opinion, that "probably the nutritive property of the potato is nearly proportionate to its specific gravity," be correct. In the mean time, however, my friend Mr. Macgillivray has obtained for me, from Dr. John Murry, the specific gravity of six of the varieties sufficiently adapted for contrast, namely,

No. 45. Late Field Kidney,	1135
No. 36. Don,	1121.9
No. 53. Emperor,	1108
No. 24. Taylor's,	1099
No. 49. Ox Noble,	1094
No. 50. Yam,	1051

From these it will be seen, by a reference to the table of the quantity of starch yielded by these varieties, that the starch increases in nearly the same ratio as the specific gravity, and thus that the correctness of Mr. Knight's opinion is proved.

LIST of Specimens of Potatoes, *with their Characters, sent to the* Highland Society, *by Mr. Lawson.*

No.	POPULAR NAME.	Early or Late.	Form of the Tuber.	Color of the Tuber.	Waxy or Mealy.	Liable to disease or free from that tendency.	Inclination of the stem.	Flavor.	Productiveness.	Grains Troy of Starch in 8 oz. Clean Tubers.
1	Seedling, Early	Very early	Round	White	Mealy	Not subject	Upright	Superior	Medium prolific	410
2	Kay's American	Very early	Oblong	Reddish	Mealy	———	Upright			390
3	Hopeton Early	Early	Round	White	Mealy	Not subject	Upright	Good	Prolific	395
4	Dutch Early	Early	Round and small	White	Mealy	Not subject	Upright	Good	Prolific	325
5	Williamson's Favorite	Early	Round	White	Mealy	Not subject	Medium	Good	Prolific	452
6	Early Champion	Medium	Round	White	Mealy	Not subject	Upright	Strong	Prolific	306
7	Early Frame	Very early	Roundish	White	Mealy	Not subject	Upright	Good	Medium	262
8	Dwarf Frame	Earliest	Round	White	Waxy	Liable	Upright	Inferior	Medium	279
9	Manly	Medium	Round and flat	White	Mealy	Not subject	Upright	Good	Prolific	300
10	Foxly	Very early	Ditto	White	Waxy	Subject	Drooping	Inferior	Unproductive	262
11	Early Shaw	Early	Round	White	Rather waxy	Not subject	Upright	Good	Very prolific	375
12	Ash-leaved	Early	Oblong	White	Waxy	Not subject	Upright	Inferior	Very prolific	363
13	American	Early	Round	White	Mealy	Not subject	Upright	Good	Prolific	385
14	Ross' Early	Early	Round	White	Mealy	Not subject	Upright	Good	Prolific	354
15	Early Wellington	Early	Round	White	Mealy	Not subject	Upright	Good	Prolific	328
16	Early Field-kidney	Early	Long and flat	White and pink	Mealy	Not subject	Drooping	Superior	Prolific	295
17	Sutherland Kidney	Medium	Oblong flat	White	Mealy	Not subject	Drooping	Good	Prolific	355
18	Asparagus	Early	Oblong	Dingy white	Waxy	Liable	Drooping	Indifferent	Very unproductive	
19	Cape of Good Hope Kidney	Early	Kidney	White	Mealy	Not subject	Drooping	Superior	Prolific	395
20	Musgrove's Giant Kidney	Early	Oblong	White	Mealy	Not subject	Medium	Good	Very prolific	390
21	Musgrove's Snow White	Early	Oblong	White	Medium	Not subject	Upright	Good	Very prolific	395
22	Fifeshire Early	Early	Oblong	White	Mealy	Not subject	Upright	Good	Prolific	465
23	Ross' Pigmy Kidney	Medium	Kidney	White	Mealy	Not subject	Upright	Fine rich	Prolific	305
24	Taylor's Forty-fold	Medium	Round	Dull red	Mealy	Not subject	Upright	Superior	Prolific	235
25	Black Skinned	Late	Round	Dark purple	Mealy	Not subject	Drooping	Delicate	Prolific	383
26	Purple Skinned	Late	Oblong	Purple	Mealy	Not subject	Upright	Superior	Prolific	268
27	Bread Fruit	Late	Round	White	Mealy	Not subject	Upright	Superior	Prolific	395
28	Red Nose Kidney	Late	Long flat	White and pink	Mealy	Not subject	Medium	Good	Medium	294
29	Pine Apple Kidney	Late	Long	White	Waxy	Not subject	Drooping	Inferior	Prolific	245
30	Variety of ditto	Late	Oblong	White	Waxy	Not subject	Drooping	Inferior	Prolific	340
31	Lancashire Pink	Very Late	———	Bright Pink	Waxy	Not subject	Upright	Medium	Prolific	441
32	Red Apple	Medium	Round	Red	Very Mealy	Not subject	Upright	Superior	Prolific	302
33	Late Wellington, or Stafford Hall	Late	Oblong	Dark red	Mealy	Not subject	Trailing	Superior	Prolific	542
34	Scotch Black	Late	Round	Black	Mealy	Not subject	Upright	Superior	Prolific	372
35	American Black	Late	Round	Dark purple	Waxy	Not subject	Upright	Inferior	Prolific	364
36	Don	Late	Round	White and purple	Mealy	Not subject	Upright	Superior	Very prolific	399
37	Captain Fraser's Seedling	Late	Oblong flat	White and pink	Mealy	Not subject	Upright	Superior	Prolific	316
38	Scotch Red	Late	Round and flat	Deep red	Mealy	Not subject	Upright	Superior	Prolific	488
39	Perthshire Red	Late	Oblong	Red	Waxy	Not subject	Upright	Good	Prolific	518
40	Scotch Grey	Late	Round	Livid purple	Medium	Tendency	Upright	Good	Unproductive	247
41	Variety of Scotch Grey	Late	Round	Dark purple	Mealy	Not subject	Upright	Superior	Prolific	356
42	Black Kidney	Late	Oblong	Black	Mealy	Not subject	Upright	Superior	Not prolific	289
43	Albany Kidney	Late	Oblong and flat	White	Mealy	Not subject	Drooping	Superior	Prolific	332
44	London Kidney	Early	Kidney	White						
45	Late Field Kidney	Late	Oblong and flat	White and pink	Mealy	Not subject	Drooping	Superior	Very prolific	416
46	Poor Man's Profit	Late	Round and oblong	Red	Mealy	Not subject	Upright	Superior	Very prolific	389
47	Lady Mary	Late	Round	Purple	Mealy	Not subject	Upright	Superior	Not prolific	377
48	Late Champion	Late	Round	White	Medium	Not subject	Upright	Good	Prolific	197
49	Ox Noble	Late	Round	White	Watery & waxy	Not subject	Upright	Indifferent	Very prolific	295
50	Yam	Late	Oblong	Pink	Watery & waxy	Not subject	Trailing	Indifferent	Very prolific	262
51	Cork Red	Medium	Round	Red	Very mealy	Not subject	Upright	Superior	Prolific	356
52	Buff	Late	Round	Buff	Mealy	Not subject	Upright	Superior	Prolific	307
53	Emperor, or Apple of the Earth	Late	Round	Purple	Mealy	Not subject	Upright	Medium	Prolific	305
54	Onion Potato	Late	Roundish	Purplish	Very mealy			Good	Prolific	304
55	Black Prince	Late	Round	Black	Medium mealy			Indifferent	Prolific	345
56	Peruvian Pototo	Late	Oblong	White	Medium mealy			Indifferent	Prolific	436
57	Biscuit Potato	Late	Round	Pink, with red eyes	Very mealy			Superior	Prolific	316
58	Wild Potato	Late	Round	Pinkish	Waxy			Inferior	Prolific	328
59	Yellow Potato	Late	Oblong	Whitish Yellow	Medium mealy			Good	Prolific	390
60	Yellow Cone	Late	Long	Ditto	Mealy			Fine	Prolific	398
61	Prize of Westerfield	Late	Round	Red	Mealy			Superior	Very prolific	295
62	Cucumber Potato	Late	Oblong	White	Medium mealy			Indifferent	Prolific	363
63	Chestnut Potato	Late	Oblong	Purple, with red eyes	Very mealy			Superior	Prolific	397
64	Wakefield Potato	Late	Oblong	Red	Rather waxy			Medium	Prolific	325
65	Early Pale Red	Medium early	Oblong	Bright red	Very mealy			Superior	Productive	356
66	Marbled	Late	Round	Marbled pink and red	Very mealy			Superior	Productive	423
67	Long Red Kidney	Late	Long	Red	Medium mealy			Good	Medium	296
68	Early Red	Early	Oblong	Red	Very mealy			Superior	Productive	305
69	Forfar Kidney	Late	Long	White	Waxy			Indifferent	Medium	420
70	Black	Late	Round	Livid purple, the same inside	Waxy			Inferior	Productive	286
71	Cup	Late	Round	Light red	Mealy			Good	Productive	441
72	White	Late	Long	White	Mealy			Good	Productive	342
73	Robertson's Giant Red Kidney	Late	Long	Bright red	Waxy			Medium	Medium	305

The potatoes in the list from No. 1 to No. 53 inclusive, were all grown on land of the same quality, viz. a rich loam of medium texture, and with decomposed stable manure.

The sorts from No. 54 to No. 73 inclusive, were grown on rich sandy loam.

In conclusion, I have only to express a hope that the investigation of the qualities and capabilities of this valuable plant will be followed out so as to lead to important practical results.

THE BREEDER & MANAGER.

[From Dixon's Live Stock Manager.]

The Middle-Horned, or Devonshire Breed and Sorts.

This breed of cattle is much esteemed for its great activity, fine flesh, readiness in fattening, early maturity, and the natural inherent state of purity of blood in which it has remained.

The cattle of this kind are frequently met with in the south and south-west parts of England, as Devonshire, Sussex, Dorsetshire, Hampshire, and Somersetshire. They have also reached as far northward as Herefordshire, where perhaps the largest sort of this breed are to be found. The red cattle of North Devon and Somerset may be considered one of our original breeds, and one which has preserved most of its primitive form: the excellence of which for labor is best proved by the fact that the use of horses is discountenanced where these cattle can be procured. Their high repute as feeders, and the superior excellence of their beef, have been acknowledged for ages; and Mr. Bakewell has paid them the highest compliment they could possibly receive, by declaring to an inquirer that the Devon cattle could not be improved by any cross with other breeds.

This breed, however, frequently runs to too great length of leg, crooked behind or sickle, hammed, and is of sufficient general substance. They are also apt to be *in-kneed*, that is, crooked in the fore legs; a defect analogous to that styled sickle-hammed in the hinder legs. It is conceived that by a nice and proper selection from their own stock, they might be bred somewhat more square and substantial, without at all detracting from their delicacy, shew of blood, or speed. Their powers of labor, as well as the quantity of beef produced from them, might thus be increased, without either debasing their fine qualities, or rendering necessary a larger portion of keep. These cattle have for a century past commanded the best price at Smithfield; but of late years the buyers there have shrewdly remarked, that although blood and fine form are very pleasing to the gentleman breeder, yet substance and weight are, and ever must be, the grand objects at market.

It must also be allowed that the Devons are the speediest working oxen in the country, and will trot well in harness; but in point of strength, they stand in the fourth or fifth class. They have a greater resemblance to deer than any other breed of neat cattle. They are rather wide-horned than middle-horned, as they are generally called: some, however, have regular middle horns, that is, neither short nor long, turned upward and backward at the points. As milkers, they are so far inferior to both the long and short horns, in quantity and quality of milk, that they are certainly not proper objects for the regular dairy, however pleasing and convenient they may be in the private family. They have, however, been used with success at Epping, in Essex, in one or two instances; though they are very commonly rejected by the dairies of their own and the neighboring counties.

It is also observed, that the best bred North Devons, being a hill cattle, are much more hardy and better winterers than could be reasonably supposed from their appearance. The ox in this variety is mostly considered in perfection about the fifth year of his age.

The cattle of the middle-horned breed that are met with in Devonshire were, according to Mr. Culley, in his time, to be found in the greatest purity and of the best kind in the vicinity of Barnstaple, which is still the case; these are of a high red color; if they have any white spots, the breed is reckoned impure, particularly if those spots run into another, with a light dun ring round the eye and the muzzle, of the same color. They are fine in the bone, clean in the neck, have horns of a medium length bent upwards, are thin-faced and fine in the chaps, wide in the hips, a tolerable barrel or body, but rather flat on the sides, with a tail small, and set on very high; they are also thin-skinned and silky in handling, feed at an early age, or arrive at maturity sooner than most other breeds; they are well fitted for draught, both as to hardiness and quick movement, and their shoulder points are admirably well fitted for the collar.

In the more full description of the true cattle of this breed, the head is said to be small, clean, and free from flesh about the jaws; the eye prominent; the countenance deer-like, light and airy; the neck long and thin; the throat free from jowl or dewlap; a darkish orange-colored list or circle round the eyes; and the same color on the nose; the ears thin and pointed, being tinged on their insides with the above color; the horns thin and fine to their roots, of a cream color, but not tipped with black, growing with a regular curve upwards, and somewhat springing from each other; light in the wethers, resting on a shoulder a little retiring and spreading, and so rounded below, as to prevent all appearance of its pinion in the body of the breast; the bosom open, with a deep chest or keel, preceding and between its legs; small and tapering below the knee, fine at and above the joints, and where the arm begins to increase, it becomes suddenly lost in the shoulder; line of the back straight from the withers to the rump, lying completely on a level with the pin or huckles, which are placed wide and open; the hind quarters seated high with flesh, leaving a fine hair-ham tapering from the hock to the fetlock; long from the rump to the huckle, and from the pinion of the shoulder to the end of the nose; thin loose skin, covered with hair of a soft furry nature, which, when in good condition and full coat, is inclined to curl, and becomes mottled with darker shades of its fixed color, that of a bright red, without white or other spots, especially on the male.

The defects in this breed may be considered to be these:—the sudden retiring of the vamp from behind the huckle to a narrow point backwards; the large space between the huckle and the first rib; the smallness of the angle inwards, at which the ribs seem to project from the spine or back-bone, giving the appearance in many instances of a flat-sided beast; and in its being so greatly tucked up in the girth, as to display an unpleasant cavity between the keel and navel, the line of which should constantly be found to hold a position as nearly as may be, parallel to that of the back, from the withers to the loins. These beasts are generally well known, and filled up behind the shoulders.

Cattle of this breed are begun to be broke in for labor at two years old in a gentle and easy manner, when they are sometimes worked until three or four, but mostly till five or six years old, being employed for all sorts of team labour, and are probably more perfectly adapted for the purpose than any other sort.

The bulls of this breed have too commonly imperfections in their forms, which are not met with in either the cows or oxen, the make of which is handsome; such should therefore be selected as have the above shape of parts as much as possible, the neck never being to be found fault with, though rising considerably thick and high on the crest, if without fleshiness at the insertion with the head. Occasionally good milkers are met with among the cows of this sort, though they are in general but indifferent in this respect.

Lord Somerville, a native of, and resident in, the county wherein these cattle are bred, speaking of the red, or Devon sort, has observed, that in describing the breed as they are really met with in common, conclusions are not to be drawn from the shape and size of the bulls, but from the usual quality of their stock. Certain it is, that individual handsome bulls are not unfrequently met with in other breeds, but it is equally true that the whole produce being this sort, stands the acknowledged favorite, or among the very first, in the great market of the metropolis, where prejudice is quite out of the question. Further, in deciding on their real merit, the animal produce afforded is to be regarded; which, in oxen whose superiority of flesh, agility in labor, and what is called blood, will be found the proper standard for judging of the bulls that got them. The following may be taken as the description of a very handsome shaped individual:—the horn is neither seen drooping too low, or rising too high, nor with inverted points; tapering at the ends, but not too thick or *goary* at the roots; the color yellowish; the eye clear, bright, and prominent, looking well behind, and displaying much of the white; occasionally a variation of color round it. It has a forehead flat, indented and small, which is met with almost universally in the breed, and indicates much blood: cheek small, and muzzle fine, which if the forehead be so, the muzzle is so too: the nose of a clear yellow or mottled: (a black nose should be constantly avoided; as though such may occasionally bear work and die well, yet it not unfrequently shows a bad constitution, or such as provincially turn scourers or *skinters*, especially when the cast of the coat is in color too pale: high and open nostrils:) the bulls in this sort sometimes said to be too *throaty*, or to have the skin pendulous or too profuse, and the hair

being curled affords an appearance of coarseness to the head, not met with in the improved long-horned, or new Leicester, breed of bulls when properly trimmed: the neck perhaps thick and goary, in the opinion of strangers, which, however, in the oxen of this sort are not to be censured, as they are thus enabled to work as they do.

In common, the bulls are in relation to the oxen, not of a large size; and it should be noticed in regard to size in general, that nature acting by food and climate, or exposure, is imperious, and will produce animals proportionate to such causes in the proper course of time, whatever the original size of the bulls and cows might have been. The neatness of the form and vigor, and energy in labor, which distinguish this breed in a great degree, if not wholly, arose from breeding by heifers, and year and two year old bulls. Compared with the horse, the shoulder is considered low; it should answer to the general thickness of the animal—on no account projecting. If the bullock be in-kneed, or bending inwards to each other, the point of the toe will be out; the point of the shoulder the same, and the beast must be hollow behind the withers, which, in an ox for feeding, is an incorrigible point, and he must, of necessity, be a slow worker. The bosom is not sharp, with a loose, pendulous dewlap; but wide in form, and mellow in handling. In purchasing an ox, great attention should be paid to the breadth of the bosom, and between the fore-legs, standing quite wide, which should be like straight pillars supporting a great weight. Much in buying is lost or gained by having regard to this point; it is not for beauty of form only, but implies strength and speed; a proportionate breadth of breast giving wind: and therefore of so much importance to a working ox. The legs are straight; and the more blood an ox shews, the smaller will it be. The circumstance of this breed shewing more blood than any other in the kingdom has been noticed by many persons ignorant of cattle, but deeply skilled in horses. The leg should be neither too long nor too short: an undue length to be particularly avoided.

Very much of a bullock's proof is allowed, on all hands, to depend on the size of the rib, rotundity of the barrel, and mellowness of the skin. These are the first points to handle in a lean and in a fat ox. The two hind ribs should be bold and prominent, as well as widely independent of each other: the skin rising easily from them, mellow and elastic, affording room to lay fat on below it.

In buying in a lean ox, a person would do well to handle him on both sides; it often happens, that the frame or barrel is not equally round on both; one being evidently to the eye and hand flatter than the other. The hips, or pins, lie so high as to be on a level with the back, either in the fat or lean state. The older the animal, the lower the upper flank drops, and consequently, the higher the hips appear. In this point of the upper flank, a skilful judge will discover much of the inward properties of a fat bullock. The hind quarters from the pin to the catch, or point of the rump, should be long and fitted up; in the estimation of choice judges, handling the centre of this space determines more of the substantial quality of the flesh and fat of a beast, than the prominence of fat so much admired by bad judges on the catch of the rump. The setting on of the tail should be on a level with the back, something elevated, nothing depressed: size long, small, taper, and with a round bunch of hair at the bottom: the tail, as in a horse, denoting much of high blood. It is noticed, that in this sort the gaskins are too much cut away, nor, as in the Holderness breed, heavy and loaded; and it should be always kept in mind, that these beasts are not bred for inactivity, but for wind, vigor, and strength; for though a breadth in the bosom, inasmuch as it is essential to wind, in a working animal, is beneficial, yet a load of flesh on this hind part tends nothing to activity; and, being of second rate quality, is not desirable.

With relation to the point of skin, they are among the thinner, rather than the thicker, classes. It is very rarely that an ox of this sort is found with a hard or wiry skin. Much depends on color: the shades most admired are the mahogany; and the more glossy, if smooth, the better. Those with curled hair are deemed excellent provers; and a very glossy mahogany skin, paler or lighter, with curls like ripples of wind on a smooth millpond, is held in the highest esteem. It is difficult to say which of these are the best; all turning out such members of good fat oxen. The paler shades, if the eye be clear and good, will bear hard work, and prove as well as any. This rule alone is absolute—that a pale skin, hard under the hand, with a dark and dead eye, denote a *skinter* in hard work, and rarely, under any indulgence, a good prover. With respect to the lower flank, and the cod, they do not, it is supposed, deserve that attention which many persons bestow on them, who think such points of prime importance. The graziers like this breed best at five years old. The worked-out steers of the vale sell for more, at five years, than at six: but six is the proper age. At eight, nine, and ten, they are going back in all their points; and in their value at seven. No ox should be kept after this period, or at most after eight. They are yoked at two or three years old, and lightly worked—labor increased at four, from which period to six they are full worked. When worked, it is supposed, they attain a larger size than when not worked, they finish their growth mostly at six years old, but the larger sizes grow the longest.

Lord Somerville has found in practice, that the pole and yoke form the true lever of an ox in draught, as the animal can draw a greater weight in that manner than in collar and harness, especially in a steep country. His Lordship states, that the bullocks never go home in the middle of the day; but hay is carried into the field. All the calves of this breed are reared conformably to his Lordship's practice.

It is said, that these oxen are not parted with by the tillage farmer, until the finishing of the barley-sowing, and, in many cases until the turnip is once stirred, yet they are grazed fat, to the average weight of forty-five score, in six or eight months: those kept on till the begining of the ensuing year, fattened on hay alone, which, in the grazing districts of the west, is held equally nutritious with any sort of corn, stand the drift to the metropolis without waste. There are many instances of marsh-feeding heifers, bought early in the first or second spring months quite poor, being made fit for the butcher by the middle of summer; and in August making uncommonly fine beef.

The station of this breed begins at Barnstaple, and is traced by the line of the river Taw, as high up as Chumleigh, then to Tiverton on the Ex, and nearly to Taunton: then, straight to the sea, over the eastern boundary of the Quanton hills, to Stoke Courcy; from which place, on the eastern extremity, to the mouth of the Barnstaple river on the western, including in the whole to the length of forty-five miles, and to the breadth, across from Tiverton to Minehead, of twenty two. To the east of the range, the breeds gets into a mixture of the Gloucester, Welch, Upper Somerset, and others, being a varied dairy sample: and more to the west, a Devon, verging on the Cornish stock. To the south, the variety of the horns in that direction is found—coarse, with a good deal of white and brown, with black and white mixtures, of uncertain properties. Exmoor is the highest-point of the district thus defined, the country shelving from it in every direction, the source of all the rivers, and the head quarters of all the cattle; at Brampton and Wyvelscomb, they are found in great perfection.

These are well proportioned, fine looking sort of cattle, which have the greatest similarity to each other, perhaps of any kind whatever, a circumstance arising, most probably, from breeding only from such as are wholly of the proper red color, and discarding altogether any that may have white on any part of them. They are a kind which, in the cows and oxen, are almost wholly without any sort of leathery coarseness about them, although the bulls are far from being free from these, and other faults and imperfections in their form.

Though the cows have been seen to be in general short milkers, in some dry thin situations of the pastures, they have been found to be by no means bad butter or cheese cows.

Where these cattle are raised with more thickness in the hide, somewhat shorter and more full in the leg, with a little more length in the body, they have been found, in the oxen, to be less tender, and to stand working better, and in the cows to be better formed for affording milk. They have a greater weight too than the common breed, as in the oxen generally from about 550 to 850 pounds and upwards, and in the cows from about 430 to 550 pounds or more.

They are a kind of cattle which are capable of standing stall-feeding in a better manner than many other sorts.

It may, on the whole, be concluded, when all the properties which should attach to an useful breed of cattle are considered, that the middle-horned, as a general sort, come much nearer to perfection than any other in this country. They are of a good size, well-formed, and in disposition to fatten, they are probably much on a par with the short-horned, and generally superior to the Suffolk. As dairy cattle, they are also as valuable as any that fall under the description of quick feeders; for although they give a less quantity of milk than the Suffolk or the long-horned, it is said to be of a richer quality in its nature.

It is, therefore, a most valuable and useful sort of neat cattle stock, in many different intentions,

especially in its late more improved state, by which its beneficial properties have been much increased and rendered more generally applicable.

THE GARDENER.

Vegetable Fluids.—Vegetables, like animals, are composed of fluids and solids. The fluid parts produce those which are solid; and the only pabulum of plants being liquid, it is necessary there should be an organic vascular system for its distribution, and that it should no less possess the vital power of assimulation, in order to supply the growth which takes place, and to diversify the products which characterise every species of perfected plants.

The general solid components of the vegetable system are, the membranous, the cellular, the vascular, and the glandular textures, the lignious fibre and the epidermis.

The general fluids are the sap and the proper juice.

General Fluid Components of Plants.

Vegetables, by their vital energy, develope themselves, increase in bulk, and augment the quantity of solid matter they contain; consequently the principles of the solids must be contained in the particular fluids which they select and imbibe from the soil. But in what manner the fluids are changed into solids, and whether any of the solid matters be taken up ready formed, or whether they result from a transformation effected solely by the action of the vegetable vessels, are subjects of consideration upon which it would be premature to enter. These fluids, however, after being absorbed by the roots, enter into and fill the cells and vessels of the plant, and form a very considerable portion of the bulk of the vegetable body. As soon as they enter the plant, they constitute its Sap, or *common juice*, to the nature of which, as one of the general components of vegetables, we shall now direct our attention.

The motion of the sap, though constant during the continuance of the life of the vegetable, is still most active in spring and midsummer; at which periods a much greater quantity of the fluid is found in the vessels of the plant. The sap appears to be in the same situation for the purposes of the plant, as the chyle of animals is, while yet in the thoraic duct, and before it is mingled with the blood, and exposed in the lungs to be fitted for the purposes of life. Neither is in a proper state for yielding the various secretions, and adding, by the process of assimilation, to the growth of the plant, or of the animal; but the analogy goes no further. In the animal, the digestive powers of the stomach and the action of the mesenteric glands so change the food taken into it, that no chemical analysis of the chyle produced from it could lead to an accurate knowledge of the food which had been employed by the animal; but in plants, the food is already prepared in the ground before it is absorbed by the roots, and, therefore, were it possible to obtain the sap from the vessels very near the extremities of the roots, we should be enabled to discoves, with considerable accuracy, the real food of the plants. This, however, cannot be accomplished; and as the sap, in its progress, dissolves some ready-formed vegetable matter, which had been deposited at the close of the preceding autumn, in the upper part of the root and at the base of the stem, its original properties are thus altered; and the farther the part, which is bored in order to procure the sap, is from the root, the more vegetable matter this fluid is found to contain. Were it possible to obtain the sap completely free from the peculiar juice of the plant, it would probably be found nearly the same in all vegetables.

When the sap is drawn from a tree early in the spring, the time when it moves or bleeds most freely, and as near the root as possible, it usually appears nearly as colorless and limpid as water, has scarcely any taste, and no particular odor. Its specific gravity is a little higher than that of distilled water. If it be kept for some time in a warm place, it undergoes sometimes the acetous, at other times the vinous, and in some instances the putrefactive fermentation. These differences would indicate a disparity in the composition of the sap of different plants; but there is every reason for thinking that they depend more on the admixture of the proper juices. The rapid vinous fermentation of some kinds of sap is taken advantage of in warm climates, for economical purposes. From the top of the Cocoa-nut palm, the natives of India extract the sap by an incision made in the evening, and receive it in a vessel set for that purpose: this liquor next morning forms a pleasant, mild, and cooling beverage; but before evening, it ferments, and becomes powerfully intoxicating. In Ceylon, arrack is distilled from this fluid; and it also yields by boiling, in the same manner as our Sugar Maple (*Acer saccharinum*,) a coarse sugar. In these cases, however, the sap is evidently mixed and combined with the proper juice of the tree. According to Mr. Knight, sap always contains a considerable portion of air. It also differs in its specific gravity, according to the distance from the root at which it is taken, the gravity increasing, with the distance; arising, apparently, in some degree, from the solution of deposited matter in its progress, but perhaps more from the transpiration of the plant, throwing off a large proportion of the watery part of the matter taken up from the soil. Such are the sensible qualities of the sap; its chemical properties and composition are discovered by tests, and analysis by heat.

According to Vauquelin, the sap of the Elm (*Utmus campestris*,) collected towards the end of April, the beginning and the end of May, in 1039 parts consisted of 1028.904 of water and volatile matter; 9.240 of acetate of potash; 1 060 of vegetable matter; and 0.796 of carbonate of lime.—The second analysis of the sap, collected at the beginning of May, afforded a greater proportion of vegetable matter, less acetate of potash, and also less carbonate of lime: and in the third analysis of that collected at the end of May, the quantity of the acetate of potash was still more diminished, and also that of the carbonate of lime. In all he found slight traces of sulphate and muriate of patash. From two different analyses of the sap of the Beech (*Fagus sylvatica*,) procured also at different periods of the same season, he obtained water, acetate of lime, free acetic acid, gallic acid, and tannin, with some vegetable extractive and mucous matter. In the same manner he examined the sap of the common Hornbeam (*Carpinus Betulus*,) collected in March and April, and found in it acetate of potash, acetate of lime, sugar, mucilage, vegetable extract, and water. In the sap of the common Birch (*Betula alba*,) he found acetate of lime, acetate of potash, acetate of alumina, sugar, vegetable extract, and water. In all the specimens thus analyzed, the quantity of vegetable matter was found to be greater in the sap drawn late in the season, than in that collected at an earlier period of it.

The modifications which take place in the roots of plants, throw considerable obstacles in the way of obtaining a perfect knowledge of this part of vegetable economy; for to obtain such a knowledge of the nature of sap would require an examination of that fluid in a greater number of different species of plants, than the opportunities and the period of any life would permit. All that we can aim at, therefore, in the present state of our knowledge, is the formation of a probable hypothesis, rather than the attainment of truth, deduced from certain experiments. In this mode of viewing the subject, we may regard the sap of plants as consisting of *water*, which is its principal component, *carbonaceous matter*, *acetate of potash*, and *carbonate of lime;* which ingredients are decomposed by the vital powers of plants, and new combinations of their constituents are produced by the same powers, so as to form the different parts of which a plant consists. The large portion of vegetable matter contained in the first sap must have been previously deposited in the cells of the root, and taken up by the water of the sap in its progress upwards: and air which is also found in sap, is either the produce of vegetation, or is taken in by the roots dissolved in the water of the soil.

Such is the nature of the sap. In spring and at midsummer it forms a large portion of the vegetable body; and is carried forward through the vessels, with an impetus sufficient to raise it to the summits of the highest trees, until arriving at the leaves, in which it is exposed to the action of the air and light, the great quantity of water it contains, being no longer necessary, is thrown off by perspiration; whilst the *succus proprius*, or peculiar juice of the plant, from which all its secretions are formed, is produced by the changes resulting chiefly from this exposure.

Weather Wise.—A gentleman in Virginia, has had a standing bet for twelve or fifteen years, that it would rain in the first Saturday in every August, which he has won every year except one. Another gentleman bet that it would rain the 25th of July, and won it. He says that it has never failed to do so for the last sixteen years.

CONTENTS OF THIS NUMBER.

Silk—Report of Maryland Horticultural Society—method of destroying Moles—Singular circumstance noticed in hewing a millstone—To preserve Potatoes and Turnips through winter—Farmers' Lyceums—Work for August—Wool—On the varieties of Potato in Great Britain—Dixon's description of the middle-horned or Devonshire breed, &c. of Cattle—Vegetable fluids—Weather wise.

BALTIMORE PRODUCE MARKET.

☞ *These Prices are carefully corrected every* MONDAY.

	PER.	PROM	TO
BRANDY, Apple,	gallon.	$0 27	$—
Peach,	"	75	—
BEANS, white field,	bushel.	2 00	—
BEEF, on the hoof,	100lbs.	5 00	5 75
CORN, yellow,	bushel.	66	68
White,	"	66	68
COTTON, Virginia,	pound.	10	13
North Carolina,	"	11	13
Upland,	"	13	15
FEATHERS,	pound.	—	37
FLAXSEED,	bushel.	1 00	1 25
FLOUR—Best white wheat family,	barrel.	6 75	7 25
Do. do. baker's	"	6 25	6 75
Do. do. Superfine,	"	5 00	5 25
Super Howard street,	"	5 12	5 25
" " wagon price,	"	5 00	—
City Mills, extra,	"	5 62	5 75
Do.	"	5 50	5 62
Susquehanna,	"	5 25	—
Rye,	"	3 37	—
GRASS SEEDS, red Clover,	bushel.	—	4 50
Timothy (herds of the north)	"	3 50	—
Orchard,	"	3 00	—
Tall meadow Oat,	"	2 50	—
Herds, or red top,	"	1 25	—
HAY, in bulk,	ton.	14 00	15 00
Pressed,	100 lbs	—	90
HEMP, country, dew rotted,	pound.	6	7
" water rotted,	"	7	8
LIME,	bushel.	30	35
MUSTARD SEED, Foreign,	"	4 50	5 00
Domestic,	"	5 00	—
OATS,	"	31	33
OIL, linseed,	gallon.	—	90
Castor	"	1 70	1 80
PEAS, red eye,	bushel.	—	—
Black eye,	"	—	1 00
Lady,	"	—	—
PLASTER PARIS, in the stone,	ton.	3 00	—
Ground,	barrel.	1 37	—
PALMA CHRISTA BEAN,	bushel.	2 00	—
RAGS,	pound.	3	4
RYE,	bushel.	71	—
TOBACCO, crop, common,	100 lbs	3 50	5 00
" brown and red,	"	4 50	6 00
" fine red,	"	6 00	8 00
" wrappery, suitable for segars,	"	6 00	12 00
" yellow and red,	"	8 00	12 00
" yellow,	"	13 00	17 00
" fine yellow,	"	15 00	22 00
Seconds, as in quality,	"	4 00	5 00
" ground leaf,	"	5 00	9 00
Virginia,	"	4 00	—
Rappahannock,	"	3 00	4 00
Kentucky,	"	4 00	8 00
WHEAT, white,	bushel.	1 20	—
Red,	"	1 00	1 05
WHISKEY, 1st pf. in bbls.	gallon.	28	29
" in hhds.	"	26	—
" wagon price,	"	—	—
WAGON FREIGHTS, to Pittsburgh,	100 lbs	1 25	—
To Wheeling,	"	1 50	—
		washed.	*unwash*
WOOL, Prime & Saxon Fleeces,	pound.	50 *to* 60	24 *to* 26
Full Merino,	"	40 50	20 24
Three fourths Merino,	"	33 40	22 24
One half do	"	28 33	21 22
Common & one fourth Meri.	"	25 28	18 20
Pulled,	"	28 31	18 20

UNDERGROUND TURNIP.

THIS turnip is represented as able to resist frost in an extraordinary degree. (See description of it in the first page of this No.) For sale at the American Farmer Establishment. Price $1 per pound. jy 8

CUBA TOBACCO SEED.

JUST received from Matanzas, a few ounces of the true Cuba Tobacco Seed, from *la Vuelta Abajo*, warranted in prime order—Price $1.00 per ounce.

I. I. HITCHCOCK.

BALTIMORE PROVISION MARKET.

	PER.	FROM.	TO.
APPLES,	peck.	$0 25	$0 37
BACON, hams,	pound.	11	—
Shoulders,	"	—	9
Middlings,	"	—	9
BUTTER, printed, in lbs. & half lbs.	"	25	—
Roll,	"	12	18
CIDER,	barrel.	—	—
CALVES, three to six weeks old	each.	4 00	8 00
COWS, new milch,	"	15 00	27 00
Dry,	"	9 00	12 00
CORN MEAL, for family use,	100lbs.	1 56	1 62
CHOP RYE,	"	1 56	1 62
EGGS,	dozen.	9	—
FISH, Shad, trimmed		—	—
" salted,	barrel.	6 37	—
Herrings, salted, No. 1 & 2,	"	3 87	4 00
Mackerel, No. 1, 2 & 3,	"	3 75	6 25
Cod, salted,	cwt.	—	2 75
LAMBS, alive,	each.	1 25	2 00
Slaughtered,	quart'r	31	50
LARD,	pound.	8	—
ONIONS,	bushel.	—	75
POULTRY, Fowls,	dozen.	—	—
Chickens,	"	2 25	2 50
Ducks,	"	—	2 50
POTATOES, Irish,	bushel.	—	62
New,	peck.	12	25
VEAL, fore quarters,	pound.	6	—
Hind do.	"	8	—

ADVERTISEMENTS.

SKINLESS OATS.

A VERY small quantity of this celebrated new article has been obtained, at an enormous expense, and will be disposed of at this Establishment, at 50 cents per ounce. But as my stock of Gama Grass Seed is, for the present, exhausted, I shall substitute this article as a return, to all subscribers to the Farmer & Gardener, on payment of their subscription. (See terms.)

I. I. HITCHCOCK,
July 29. Amer. Far. Estab.

☞ See an account of this article on the first page of number 13.

A SUPERIOR JACK FOR SALE.

FOR SALE, by a farmer in this state, a splendid Maltese Jack, *first rate in every respect.* He is *nearly* 14½ hands high!—Eight years old last spring; quick in performance, and *efficient* to an unusal degree. 31 mares out of 34 in one instance, and in another 8 out of 9 mares belonging to one farmer proving with foal by him in 1833. He is probably in every respect one of the best Jacks ever imported into the United States. Price $1000. Address

I. I. HITCHCOCK,
jy 29 Amer. Farmer Establishment.

WESTPHALIA GEESE.

A FEW pairs of these unrivalled Geese for sale at this establishment. They were hatched in April last, and are *now* considerably heavier than old geese of the common breed.

These geese are of the purest white, with bills, legs and eyes of a bright scarlet color. Geese of this breed have attained the enormous weight of 20 pounds, and those now offered for sale are for their age equal to any both in beauty and size that we have ever seen—Price $5, a pair. They can be sent safely in coops or crates any distance. july 29

NEW LEICESTER BUCKS.

I AM authorised to sell several fine Bucks of the Leicester or improved Bakewell breed of Sheep, and one do of the Cotswold breed, at from $75 to $100 each. Who will have one or more? I. I. HITCHCOCK,
July 15. American Farmer Establishment.

THE COMPLETE FARMER.

JUST PUBLISHED and for sale at this establishment, price $1, "The Complete Farmer and Rural Economist, containing a Compendious epitome of the most important branches of Agriculture, and Rural Economy. By Thomas G. Fessenden, Editor of the New England Farmer." "Agriculture is the art of arts: without it man must be a savage, and the world a wilderness."
june 24

DEVON CATTLE.

THE subscriber has the selling of a considerable number and variety of these valuable cattle at prices *unusually low*, viz: Bulls from 75 to $100; Cows and Heifers from 60 to $80, and Calves, one year old and less, from 40 to $60. More particular information may be had by application to I. I. HITCHCOCK,
May 9. American Farmer Establishment.

IMPROVED DURHAM SHORT HORN BULLS—CHEAP.

I AM requested by a gentleman of high character as an agriculturist, in a neighboring state, to offer for sale several Bulls of his, of which he has yet given me no other description than the following, viz: "My stock is of the Short Horn Durham breed, and derived from the best and purest sources, imported recently." He offers Bulls two years old, one year old, and of the last spring, at the following prices respectively: $200, $150, $100.—If, as I presume from the character of the gentleman, his stock is of a high order, and if he can, as I also presume, furnish pedigrees of pure blood, then is the present a rare opportunity to procure fine Bulls, at more moderate prices than I have hitherto been able to offer them. I will ascertain further particulars in regard to this stock, and be able shortly to speak definitely as to its character. In the mean time, should any gentleman want one or more of these Bulls, he may rely entirely on receiving through this Establishment no other than such as shall be represented and proved too.

Address I. I. HITCHCOCK,
July 15. American Farmer Establishment.

NEW HORSE POWER AND THRESHING MACHINE.

THE SUBSCRIBER, as agent of the Proprietors, for the sale of "Lane's Endless Chain Horse Power, and Threshing Machine," within the state of Maryland, offers for sale the above named implements together or separate. These implements have been used several years in New England and were last season introduced into Maryland. The Horse Power consists of a box or frame, 9 feet long, 4½ feet high and about two feet in breadth, the bottom of which is an iron chain, in the form of a band 15 inches wide, which revolves like an apron around two drums, placed near each end of the box. To the shaft of one of these drums, projecting beyond the side of the box, is attached a wheel of 27 inches diameter, around which a leathern band revolves giving motion to the Thresher or any other machine to be moved by it. The motion is communicated to the power by a single horse standing within the box upon the endless chain and by travelling upon it causing it to revolve around the drums, and thus give motion to the machinery. The Horse Power is *portable*, weighing only about half a ton and occupying no more space than 9 feet by two.

The Thresher is of small size, but very perfect in its construction, and sufficiently strong. When used, it stands by the side of the Horse Power, and is attended by three men. By the use of this apparatus three men with one horse can easily thresh in a day of good wheat from 80 to 100 bushels. If two horses be used alternately, each an hour, more than this can be done with ease. It threshes remarkably clean.

The whole apparatus, is strong and durable, and not liable to get out of order. A winnowing machine can be attached by a band and operate at the same time. This machine is confidently recommended to farmers as a thresher, and the Horse Power to Mechanics to drive various kinds of machinery.

PRICES.—For the Horse Power and Thresher together, with the privilege of the patent right for using them on a farm, two hundred and twenty five dollars. For other uses than threshing grain the Horse Power alone with the patent privilege is furnished for $150, to $175, and the Thresher will be sold alone for $50.

Address, I. I. HITCHCOCK.
American Farmer Establishment.

The PATENT RIGHT privilege for making, using, and vending these implements, in any county in Maryland, except Baltimore City and County, will be disposed of by the subscriber on very liberal terms. jy 1

Printed by SANDS & NEILSON, South East corner of Calvert and Market-streets.

THE FARMER & GARDENER;

AND LIVE-STOCK BREEDER & MANAGER.

CONDUCTED BY I. IRVINE HITCHCOCK, AND ISSUED EVERY TUESDAY FROM THE AMERICAN FARMER ESTABLISHMENT, AT $5 PER ANNUM, IN ADVANCE.

No. 15. **BALTIMORE, AUGUST 12, 1834.** **Vol. I.**

☞THIS publication is the *successor* of the late
AMERICAN FARMER,
(which is discontinued,) and is published at the same office, at five dollars per year, payable in advance.
☞When this is done, 50 cents worth of any kind of seeds on hand will be delivered or sent to the order of the subscriber with his receipt.

American Farmer Establishment.

BALTIMORE: TUESDAY, AUGUST 12, 1834.

"PENNSYLVANIA FARMER."—We have just received the first number of a new agricultural paper, edited by G. M. Barr, near Shippensburg, Pa. called the "Pennsylvania Farmer." It is an octavo of 16 pages—26 Nos. will constitute an annual volume of 416 pages. The paper is good, and the typographical execution respectable. We wish him success; and we do not doubt but he will meet with a liberal patronage. The terms are one dollar and fifty cents per year in advance.

Every farmer ought to consider an agricultural paper as necessary an appendage to his farm as an almanac; and we will likewise say, that *he ought* to consider himself under a moral obligation to reciprocate the advantages which he may receive from the experience of others, by communicating his own experience, for the general benefit. The improvements in agriculture, though in some neighborhoods considerable, are far behind what has taken place in most of the mechanical arts. It is readily to be accounted for—the mechanical arts depend upon fixed and known laws, susceptible of calculation and mathematical demonstration; experiments may be performed in open day, determined speedily, and with precision: on the contrary, with agriculture, the whole process is carried on in the dark bowels of the earth, hidden from the eye of direct observation, and matured by the slow progress of chemical affinities. A single experiment must require several months, and in many cases several years, to be brought to any decisive determination, and in our present state of information the modus operandi remains purely conjectural. Added to this, the mechanical and commercial pursuits having been most successfully prosecuted, have best rewarded their votaries, and therefore have drawn off most of the talents and enterprise of the country into their line of pursuits, whilst the agriculturist is left to plod on in the old routine, ignorant of the principles of his art, and as tenacious of his old habits as a Mandarin of his caste. The multiplication of agricultural papers in every part of our country, will afford convenient opportunities for farmers to record the effects of experiments, and if these papers are sufficiently patronized they will ultimately be the means of raising the occupation of the farmer to that standing in the rank of his fellow men which the importance of his calling deserves.

HOGS—MACKAY BREED.—In commencing the business of a stock-breeding establishment, it was determined to spare neither pains nor expense, within the bounds of reason and sound discretion, to make the establishment as complete as could be done with the limited means at our command. It is a decided aphorism in the breeding department, that different kinds of stock, and animals of the same kind, but possessing different qualities, forming varieties, are best adapted to different locations, and different views of farmers.

It therefore becomes necessary, in order to answer all the purposes intended by such an establishment as we are desirous of rearing up, to possess all the best and most approved varieties of the several breeds, with which the superior art of breeding has lately enriched Europe and our own country.

In the prosecution of this desirable end, we have added to our stock of improved breeds of hogs another superb variety, called the *Mackay breed*. The history of these fine animals is given us by the gentleman from whom they were purchased. He says, "I purchased the hogs of Capt. John Mackay, of Boston—they are what is called the *Mackay breed*. The competition for the premium on swine, at the Brighton and Concord shows, has been of late years chiefly between this breed and the Bedfords. Capt. Mackay himself has taken on his breed over $200 at the shows in the last six years.

"When Capt M. followed the sea, he made it a rule to purchase pigs, when he saw those of peculiar good quality, in whatever part of the world they might be, and brought them home to his farm in Weston, near Boston. After he left the sea, he became engaged in rural pursuits, and resolved to see what he could do by crossing his various races of swine, which he had collected on his farm. By perseverance, directed *by good judgment*, he at length obtained what he calls a *distinct breed*, to which the public have affixed his name; and which, for aptitude *to fatten at any age*, large size, &c. are perhaps unrivalled. Capt. Mackay has now quit breeding swine, having sold out his stock.

"The specific characteristics of this breed are, head short and small; chest very broad; back tolerably broad, rather falling below, then rising above a straight line; gammons large; legs very short and tolerably small; constitutions not so hardy as the Bedford, but dispositions more easy and peaceable."

MARYLAND HORTICULTURAL SOCIETY,
August 9, 1834.

Mr. Robert Dore presented one dozen very fine Tomatoes, of the mammoth variety; and six crook-neck Squashes.

Mrs. B. I. Cohen presented three varieties of plums of very superior flavor and size.

Mr. Samuel Feast presented specimens of the King Solomon and Triumphant Dahlias, Microphylla Rose, Tea Rose, Cantua Coronopifolia, and several other flowers.

Mr. T. B. Skinner exhibited a Cocoanut with a small well-formed one in the cavity.

STATE OF COTTON IN HAVRE.

Years.	Stock 1st Jan.	Arrivals 5 first mos.	Sales 4 first mos.	Stock on 30th April.
	Bales.	Bales.	Bales.	Bales.
1834,	34000	49302	72302	11000
1833,	17000	93401	80381	30100
1832,	18000	76014	71014	23000
1831,	45000	32378	50378	27500
1830,	17500	102713	73513	46500
1829,	27000	60944	62144	25800
1828,	46500	68505	63005	52000
1827,	54000	69695	56305	37300
1826,	13500	79498	68498	24500
1825,	14500	47123	44323	17300

A SUCCESSFUL EXPERIMENT.—It is said that the experiment made by the Dutch, to test the usefulness of steam carriages on common roads, has been completely successful. The roads of Holland are well calculated for this purpose. They are level, and during the reign of Louis Bonaparte, they were greatly improved—the principal highways having been paved with hard burnt tiles placed edgeways—thus making perhaps the best highway in the universe.

THE FARMER.

AGRICULTURAL CHEMISTRY—It is scarcely possible to enter upon any agricultural investigation of the properties and value of vegetables, or of any plan for the amelioration of the soils, without finding it more or less connected with the elucidation of Chemistry.

When lands are rendered sterile from any defect in the natural constitution of the soil, the evil is to be detected only by chemical analysis; and when a system of amelioration is attempted, the responses of the retort should dictate the measures of the agriculturist. Some lands of good apparent texture, are yet sterile in an eminent degree, when common observation and common practice afford no means of determining the cause of sterility, or of removing its effect. In such cases, the land must contain some principle which is poisonous to vegetables; and the application of chemical tests may readily point out the evil, and perhaps destroy its effects.

If the salts of iron should be found to abound, they may be destroyed by lime,—if an excess of sileceous sand be present, the remedies are clay and calcareous matter,—if a deficiency of calcareous matter exist, the remedy is obvious, lime should be applied,—if there exist a superabundance of vegetable matter, paring burning and quicklime will remedy the evil,—if a deficiency of vegetable matter be the cause of sterility, manure must supply the defect,—if lands lie low and flat, they will require a soil less tenacious of moisture, and will require to be rendered more freable by the application of burnt clay, sand, &c. and to be sufficiently drained,—if, on the contrary, lands are situated on a declivity, they will require the constituent principles to be more tenacious of moisture. In all these cases to find the proper remedy by observation on crops, would require a long course of tedious and expensive experiment, which would at last be but uncertain and deceptive; but which may be readily determined, with precision and certainty, by chemical analysis.

It is our intention to occupy a part of our future columns with a course of observations on this sublime science, as applied to agriculture; and to give a description of the principal agents concerned in the production of vegetables, viz: the three principal earths, which are necessary in their due proportion, to constitute a fertile and productive soil; with their numerous combinations, and the proportions of each which are favorable to the production of particular vegetables:—These are clay, or alumina; silex, or sand; and calix, or lime. The principal constituents of all vegetables are, Oxygen, Hydrogen, and Carbon, united with more or less of the abovementioned earths, some one of which enter in small proportions into the composition of most vegetables. This is an important branch of the agricultural science, and if by our feeble efforts we can enlist more able experimenters into this wide and almost untrodden region of investigation, our end will be attained.

FARM ACCOUNTS.

Below we give an example of Farm Accounts, as kept by some of our northern farmers, which is well worth the serious attention of every agriculturist. There could not, perhaps, be a more effectual method fallen upon to break up old habits, and bad courses of farming, and to lead to new and improved methods of cultivation, than to have the Dr. and Cr. of plantation operations, presented to the eye in the form of a balance sheet. Thus keeping of such accounts is too much neglected in this part of the country. The farmer will have invested in land and stock, ten, fifteen, or twenty thousand dollars, and some twice or three times that amount, and yet open no account with his farm, that he may know whether it produces the interest of his invested capital or not. What would be thought of a merchant who was wielding a capital of equal amount, but who kept no accounts by which he would ascertain at the end of the year the state of his profit and loss? It is usual with that calculating and thrifty class of men, once in the year, to take an account of stock, and balance their accounts, that they may see how affairs stand; but the farmer leaves that trouble to his administrators—It would certainly lead to great improvements if the farmer would open a regular double entry account with every article raised on his farm. He would then know what was worth raising and what was not.

[From the Genesee Farmer.]

FARM ACCOUNTS, &c.—*Mr. Tucker*—I wish your correspondent *Ontario*, in No. 9, had given us a sample of his own manner of keeping his dairy; but as he has not, I will now send you the extract from my farm account promised you some time since.

ACCOUNT WITH A CROP OF BARLEY.

The first which I shall give you is an account of a crop of barley in 1832, which was not more than a half a crop in consequence of the injury done it by the worms. I omitted to roll the ground after sowing or after the grain come up, which I have no doubt cost me fifty dollars in the produce of the crop, as the rolling would have prevented the worms from working in the ground; but as it was, the following was the result:

Expenses.

Drawing manure,	$12,00
Spreading do	1,25
Ploughing ground,	6,75
Sowing and harrowing, 2 days,	3,00
13 bushels seed, at 8*s.*	13,00
Interest on 6 acres land,	5,25
Harvesting,	6,06
Carrying to market,	6,00
	$53,31

Proceeds.

132 bushels barley, at 5*s.* 3d.	$86,63
2 do do not clean, 4*s.*	1,00
	$87,63
Less expenses,	53,31
Nett gain,	$34,32
Or per acre	$5,72

There were 6 acres of land on which the above crop was grown; and in consequence of the time required to draw the manure on the ground, it was not sown until the 28th of April, at least 3 weeks later than it should have been put in, as I think it cannot be put in the ground too early after it is in order. You will perceive I have not charged for threshing, as I think myself well paid by the straw.

ACCOUNT WITH THE SECOND BARLEY CROP.

In the spring of 1833, I sowed 2½ acres to barley which had been highly manured, and planted to corn the preceding year. The expenses and proceeds were as follows:

Expenses.

Ploughing,	$3,00
Sowing and dragging	2,00
7 1-2 bushels seed, 5*s.*	4,69
Harvesting,	4,50
Manure,	3,00
Interest on land,	2,91
	20,10

Proceeds.

114 bushels of barley at barn, 4*s.* 2*d.*	$59,28
Less expense,	20,10
Nett gain,	$39,18
Or per acre,	15,67

The above was sown in the early part of April, and being near the barn I sowed a large quantity of seed rather than confine my fowls. I put this piece of ground to wheat last fall, and when I ploughed it the white clover was eight inches high and as thick as a mat.

ACCOUNT WITH A WHEAT CROP.

I will also give you the expenses and proceeds of my wheat crop in 1833.

Expenses.

25 days ploughing with a double team, 20*s*	$62,50
Ploughing and harrowing,	45,88
Add for parts of days not entered,	10,00
44 bushels of wheat,	44,00
Sowing do	3,00
Harvesting,	74,00
Cleaning wheatand carrying to market,	12,00
Interest on 32 acres land at $50 per acre,	112,00
	$363,38

Proceeds.	
790 1-2 bushels wheat, 8*s*.	$790,50
Less expenses,	363,38
Nett gain,	$427,12
Or per acre	$13,34

Twenty acres of the above was a spear grass sod from which wheat was taken in 1833—half of it was ploughed in June and early in July, and ploughed again in August—the other half was turned over the last of August and first of September, and sowed on the sod. I gave the preference to late ploughing.

QUANTITY OF SEED PER ACRE.

I sowed, for one of my neighbors, 30 acres of barley last spring, and put 2, 2½, 2¾, 3 and 3½ bushels of seed per acre; and previous to harvesting I went over the whole in company with him, and examined it carefully, and would recommend for good ground not less than 2½ or more than 3 bushels per acre. If too much seed is sown, the heads are short, straw fine, and badly lodged.

EARLY AND LATE PLOUGHING.

A piece one rod wide was ploughed on the outside of a large land early in September—the rest of the land left until late in December, and then ploughed. The whole was again ploughed in the spring of 1833, and sowed to barley. The difference was at least one third in favor of the early ploughing; and as it lay by the side of the road, the difference was noticed by more than fifty persons during the summer, and the inquiry as to the cause was made almost every day. No reason could be given but the time of ploughing.

SUMMER FALLOWS UNNECESSARY.

I think a farm my be kept in good heart, and a crop taken every year from it, if the straw or manure made therefrom is returned to the land. A crop of barley will usually pay for itself and put in a crop of wheat—so you will perceive the balance in favor of a fallow crop over a naked fallow is equal to from five to eight dollars per acre.

EXPERIMENT WITH FLAX AND CARROTS.

I sowed one fourth of an acre with flax and carrots, but owing to the white clover forming a perfect sward previous to the pulling of the flax, the carrots failed; but from the size to which they attained, I am satisfied that on land which is clean and not disposed to seed itself, they would be profitable.

DEEP PLOUGHING.

My expense is heavy for ploughing, as I run the plough as deep as a good yoke of oxen and a good pair of horses can carry it, and plough one and a half acres per day in most cases, four inches deeper than the ground had ever been stirred previous to my purchasing the farm in 1832.

THE CHESS CONTROVERSY.

I do not intend to enter the controversy respecting chess, and have only two or three facts to state. In 1832, when I purchased my farm, there was a crop of wheat on the ground which had been sown from good seed without any extra cleaning, from which I received 414 bushels of wheat, and 32 bushels chess. In the fall of 1832, I sifted my seed by hand, and sifted out the small wheat and most of the chess and cockle. The product was 790½ bushels of wheat and 2 bushels chess; and the miller who purchased both crops, pronounced the crop of 1833 the cleanest; and there was more than four times the chess in this town in 1833 than there was in 1832. There is a farmer about one mile from me who has been for 20 years noted as a particular nice farmer, and by his neighbors called more nice than wise. He offered one dollar a kernel for every kernel of chess or cockle which could be found in his crop of wheat, and he sold most of a large crop for 10*s*. per bushel for seed last fall, when his neighbors could only get 8*s*.

You are at liberty to use any part of the above, if you will put it in a dress fit to be seen without altering the facts, and use it when and in what portion at a time you please. My time is so much employed that it is seldom I can get an hour to write even to my friends, and I am surprised that my neighbors can find time hang on them so heavily, but I suppose it must be that I do not work as quick as they do.

Respectfully yours, &c. S. P. RHOADS.

Skaneateles, March 11, 1834.

GAMA GRASS.

ALABAMA, July 15, 1834.

To the Editor of the Farmer & Gardener:—

SIR:—In the cultivation of *Gama Grass*, I have found that planted at two feet it is brought sufficiently close. At each cutting a slight stirring of the ground, with a common sprouting hoe, has been of much advantage in hastening the following growth. Early in the spring I have found much advantage from a liming, and a sprinkling of rotten cotton seed, which after the first cutting I dig into the soil, amongst the roots. Cowpen manure has been applied, also, at the same period, with singular effect. The capacity of this plant for standing excessive drought, is certainly one of the most valuable claims it has, and was fairly settled during the severe drought experienced in this section of the Union, in 1832. In no month was the growth more than three or four inches shorter than the preceding seasonable year. As regards its duration, I can only state, that a highly intelligent Spanish gentleman, who immediately recognised it, and with much apparent pleasure observed it an object of cultivation, answered to my enquiry respecting its durability, that a Spaniard who started in life with a well set lot of the Gama Grass, and a sound and young mule, calculated that they would all cease to exist about the same time; and that, "may you live as long as Gama," was deemed amongst the Spanish peasants in the provinces, no uncourteous sentiment.

In one light, I must continue to view this plant as invaluable, especially to the south. Whenever the agriculturists of the south can be persuaded that it is their best interest, not only to preserve their land, but to render it more productive by a spirited system of improvement, then I am persuaded this grass will be found without a rival. As a substitute for *soiling*, the key to a successful accumulation of *manure*, as also to a successful improvement of the breeds of *cattle*, so far this grass is without an equal—for quantity of vegetable matter, most agreeable to horned cattle as well as horses. The little time consumed, and the ease with which one hundred head of cattle might be fed daily, would appear incredible to those unacquainted with this forage. With the aid of this grass, no part of the union, I must contend, presents a superior resource for securing two of the most important objects to the planter, viz. the improvement of his *cattle*, and the accumulation of the Arator's "*gold dust*"—the means of enriching his lands, and the most perfect security for an ample return for the labor bestowed on his soil.

As regards the soil on which Gama ought to be cultivated, I will state a circumstance that has come under my own observation. Like Mr. Ellison, I felt confident it would be found to grow best in a soil with a good clay foundation; but to my no small astonishment, the most luxuriant growth yet produced in this state, that I have seen or heard of, has been on a pine woods hill, the soil of which is almost proverbial for being without a foundation of any kind—a quicksand bed—the ground has had for some years a garden cultivation. I have plants now in luxuriant cultivation, that has been cut monthly, during the summer, for eight years; and I am assured the growth this year is as vigorous as any preceding. June gave me the finest cutting I have ever got from it.

In propagating this grass I am aware of the difficulty of procuring the seed. This I have, however, lessened, by the plan lately adopted. It is readily discovered when the seed is ripe, at which time a touch with the finger will detach it from the ear or head. About eight o'clock every morning, with a few children, I walk through the lot, and gather the seed that is ready to fall. In this way I find no difficulty in soon obtaining a quantity. To this mode of gathering I add another facility for ploughing it, by planting the seed in a rich bed; the first year taking up, pulling the plants to pieces, as done with the shallot, and set out my ground, (previously well prepared,) intended to be a permanent lot the second year of its growth. I find the plants soon become strong and luxuriant. AGRICOLA.

CULTURD OF RAPE SEED FOR OIL.—Colchicum or rape seed is of the greatest importance, and produces an oil which is, and has long been, much wanted for manufacturing purposes. This seed is grown abundantly in all parts of Europe, and the oil made from it is extensively used in the process of manufacturing cloth: it is, I believe, the cheapest oil they have, and takes the place of common kinds of olive oil, which the manufacturers of this country are obliged to use at a great cost. This is a matter of great importance, when it is known that to every 100 pounds of wool carded there is consumed from two to three gallons of oil. The rape seed oil is so cheap and abundant in Germany, that it is much used in adulterating linseed oil; hence the bad quality of some of the German paint oils, as the rape seed oil does not possess the dying qualities of that from flax seed, and is therefore unfit for the purposes of painting, &c.

Having been for a long time engaged in the manufacture of flax seed oil, and having made various experiments on other seeds, I have, of course, had some experience on the subject. In

relation to rape seed, I had an excellent opportunity of making full and satisfactory experiments. In the year 1822 or 1823, an English gentleman who was familiar with the culture of rape seed, and who had a farm somewhere in the neighborhood of Salem, N. J. brought to my establishment about forty bushels of rape seed, which he had produced upon his farm. The account he gives of its culture was this. Two acres were sown with this seed (broad cast) in the month of August; it sprouted, and was growing very handsomely, but late in the fall the cattle broke into it, and, as he thought, completely destroyed it. He abandoned the experiment, and suffered his cattle to roam in it all winter; but in the spring, observing it sprouting again, he put up the fence, and as he expressed himself, "let it take its chance." The two acres, with this, as he considered it, unfair experiment, produced him about forty-four bushels of seed, for which I offered him $4 per bushel, which he refused to take. I expressed it for him; and although my apparatus was not by any means perfectly adapted to the purpose, the manufacture differing in some respects, not necessary to state, from flax seed oil, I produced three and a half gallons of oil per bushel. The cake, that is, the pulp, after the oil is expressed from it, he valued highly for fattening cattle, and refused to take seventy-five cents per bushel for it; the oil he sold to a woollen manufacturer for $1,30 per gallon, thus including the cake, realizing $5,30 per bushel, out of which he paid the expense of manufacturing. It is, I am told, considered in England a profitable crop, although the price is not much, if at all, above $2 per bushel. The gentleman was in high spirits as to the result, and told me he intended to go into the culture of it more extensively; but, from what cause I do not know, I have never seen him or heard from him since—whether he failed in his experiments, died, or returned to England, I do not know. I have not, however, the least doubt that our soil and climate are well adapted to the culture of this seed; it is of the same family with the cabbage, which every one knows grows luxuriantly here. We have, besides, such a variety of soils and climates in our country, that if it will not succeed in one district, it certainly will in some other.—*Journal Franklin Institute.*

THE BREEDER & MANAGER.

[From the London Lancet.]

LECTURES ON VETERINARY MEDICINE,

Delivered in the University of London, by Mr. Youatt.

LECTURE III.—(CONTINUED.)

The Vomer.—The last bone to be described is the *vomer*. It cannot be said, strictly speaking, to form a part of the floor of the cavity of the nose, but it lies along the centre of it, denticulated with, and supported by, the suture which unites the palatine processes of the superior maxillary. It is called the vomer, from its resemblance to a ploughshare. It reaches from the palatine processes of the anterior maxillary to the sphenoid bone; and is composed of a groove which embraces and supports the cartilage that divides the nostrils. It continues in contact with the floor of the cavity through its whole extent, and when it arrives at the ductus communis, it pursues its course along the centre of it, unconnected with either of the sides, until it arrives at the æthmoid bone, on the body of which it expands, seemingly embracing it; and two processes like the ears of a cat project still more posteriorly, and terminate on the sphenoid bone. It does not, however, closely adhere to the æthmoid bone, but there is a space between them towards the centre through which nerves and blood-vessels pass to the nostrils and particularly to the cartiliaginous septum.

The difference between this bone in the horse and in *cattle*, principally consists in it articulating in the latter with the maxillary bones only, and not with the palatine, so that in them the nasal cavity is not divided through its whole extent, but there is a communication under the vomer, before we arrive at the ductus communis, and this communication is more or less extensive in proportion to the space occupied by the palatine bone in the floor of the cavity. In consequence of the vomer being thus separated from the palatines, and likewise of the depth of the palatine surfaces that line the ductus communis, the vomer seems in cattle and sheep to be deeply buried between them. The groove of the vomer is likewise deeper in cattle than in the horse, for if it denticulates only with a part of the floor, it is necessary that it should more deeply embrace the septum in order to give it sufficient support.

The Septum.—The central wall of division between the cavities of the nose is a cartilaginous, and not a bony one. It is of considerable thickness and strength, embedded in the channel of the vomer below, firmly adhering to the suture of the nasals above, and extending from the points of the nasals anteriorly, to the descending floor of the frontal sinuses, and to the cribriform plate of the æthmoid bone posteriorly. It divides the cavity of the nose into two equal parts, and is placed in the centre for the purpose of strength. I have stated that the nasal bones are liable to injury; they are occasionally fractured, but this firm and elastic cartilage placed under the crown of the arch affords a very considerable support, and a support of a peculiar nature, a gradually yielding resistance, that neutralises almost any force that can be applied.

We shall see, by-and-by, that the membrane lining the nasal cavity is a highly sensitive one, and peculiarly liable to accident and disease. The inflammation excited will rapidly spread, and the whole of the cavity may participate in it; thence would arise pain and swelling, and difficulty, or impossibility, of breathing through a passage previously nearly filled with the apparatus belonging to the sense of smell. There is one species of inflammation insidious and fatal, to which the horse and his varieties are alone exposed—viz. that of glanders. This interposition then of the septum is a wise and benevolent provision to hinder the spread of the mischief, by cutting off all communication with the neighboring parts; and also to preserve one nostril pervious, when the other is diseased or obstructed. It would appear as if there was a design in this—as if that dreadful malady, which our absurd management of this noble quadruped has entailed upon him, had been foreseen, and in some degree provided against. The horse and the ass alone are subject to glanders, and in them alone is the division between the nostrils perfect. From the separation of the vomer from the palate there is a communication between the cavities far below, the crescental border in *cattle and sheep*, while in the *hog* the perfect division scarcely extends more than half-way along the nostril. There is a sufficient division to cut off the communication of inflammation or other diseases from one nostril to another under ordinary circumstances; and where this pest of the equine race is concerned, the division is perfect. Where it is left imperfect by the separation of the vomer from the floor, and the consequent impairment of strength, there is provision made for the security of the part in the broad expanse of the forehead in the ox and the sheep, and on which the blow would be more likely to fall than on the nasals; and in the form and nature of the connexion of the nasals with the neighboring bones, and also in the strength of those bones in the hog and dog.

The Æthmoid Bones.—We arrive at length at the contents of the nasal cavity. Posteriorly and superiorly, on each side, in the common duct, but scarcely reaching into the closed nostril, is the æthmoid bone, or that portion of it which may be termed the *æthmoid cells.* On the upper and anterior part of the æthmoid bone in the *horse* there is a somewhat-curved projection or eminence, possessing no indistinct resemblance to the forepart of the comb of a cock, and hence called the *crista galli.* It supports the perpendicular plate of the skull before, and the falciform process of the dura mater behind; on either side of it, and supported by it, are two thin plates of bone pierced with innumerable holes—the *cribriform plates* of the æthmoid bone—and through which pass the pulpy filaments of the olfactory nerve.

From the bony arch which surrounds this plate, arises a pear-shaped collection of thin, porous, bony cells. I feel some difficulty in describing them. Conceive a great number of little hollow pedicles proceeding from, and forming around, the cribriform plate. As they move downward they belly out into distinct vesicles or cavities; smaller and more numerons behind; fewer in number, and larger in front, and each of them, not a simple cavity, but more or less convoluted; while the bony walls of these cells is of gossamer thinness, and porous as any gauze; all of them communicate together, and are lined and externally wrapped together by the same membrane, the whole assuming a pear-like shape, attached by its base or greater extremity, decreasing in size as it proceeds downward; the cells becoming fewer, and terminating at length in one cell, a kind of pedicle or stalk, and which passes under the superior turbinated bone, and communicates with the central meatus, and forms a kind of valve over the opening between the nasal cavity and the maxillary sinuses. Then if you add that the olfactory or first pair of nerves abuts upon these cribriform plates, and pass through their minute openings, and spreads itself over every one of these cells, but thicker and more evident to the eye near the cribriform plate, you have a tolerably correct picture of this portion of the æthmoid bone.

This bone has different degrees of development in different animals, in proportion to their acuteness of smell. The *ox* is not so domesticated an

animal as the horse. He has more occasion for acuteness of smell than the horse, and particularly in the early part of the spring, when the plants are young, and have not acquired their peculiar scent, therefore this portion of the æthmoid bone is much larger in him than in the horse. In the *sheep* it is large, and seems to fill the superior portion of the nasal cavity. It is even more developed in the *swine* than in the horse, but in the *dog* it seems to occupy the cavity almost to the exclusion of the turbinated bones. Being nearer to the cribriform plate than they are, it is probably most concerned in the sense of smell, and therefore larger where acuteness of smell is required, and in proportion as is required. It is much more fragile in the dog than in the ox, and the plates have a considerably thinner structure. The æthmoid bone of the horse or the ox may be removed from its situation with little injury, but that of the dog can scarcely be meddled without fracture.

[From Dixon's Live Stock Manager.]

Sussex and Herefordshire Varieties.

In these varieties, which are a larger sort than the former, the color is stated to be deep red, with fine hair; rather thin skins; necks and heads clean; horns neither long nor short, rather turned up at the points; well made in the hind quarters; wide across the hips, rumps, and surloins; narnow in the chines; tolerably straight in the backs, but the ribs or sides lying rather too flat; thin in the thighs, and bones not large. An ox, six years old, when fat, will weigh from sixty to an hundred stone of fourteen pounds, and often much more. The fore quarters are generally the heaviest. The oxen are mostly worked from three to six years old, sometimes to seven, when they are turned off for feeding.

Sussex.—This variety, or breed, though not so large as the Herefordshire, exceeds those of most other districts, being held in high estimation for beef and labor, and, in some degree, for milk. It is a mixed breed or sort, with which equal pains do not seem to have been taken in their improvement as with the Herefordshire kind. The cattle may be found in a state of original purity as to form, in their native district. This is a sort which is generally red or brown in color, and which shows much blood; wide and middle-horned, the points turned upwards, and backwards; of various sizes, but the larger somewhat too coarse in the bone, and of insufficient width or substance for their great depth of carcase. It is thought that they need no cross with other breeds, having all the materials of improvement within themselves, unless, perhaps, a Herefordshire cross might be useful in some, to remedy the excessive fatness. Their speed is great, and it is doubtful whether even the Devons are in that respect much superior; they are, at the same time, equal in power in the cultivation of the harvest clays, and in draught over the deepest roads; in temper, somewhat quick, like the Devons. These different varieties of the middle-horned breed of cattle, for their particular excellencies, claim the attention of breeders, and become objects of national interest, through the country, as beasts of labor.

When this variety is compared with the Devon breed, the beasts rise to much greater weight, and, of course, have far more strength for work. They are not so thin, narrow, or sharp, on the top of the shoulder, or blade bone, nor drop so much behind it; nor do they in general so much project in the point of the shoulder, nor stand so narrow in the chest; their chines are not so thin, nor are they so flat on the body or barrel; they do not hang so much in the flank; they are equal in their property of fattening, and of equal value to the grazier; their hides not quite so thin or soft, but much the same in the mellowness of their feel; not so wide on the hips, nor so clean in the head, neck, and horns, nor no small and light in the bone, but altogether a highly valuable variety of neat cattle stock.

It is, however, a sort of cattle so similar in appearance to the Devonshire kind, as scarcely to be distinguished, except by good judges; but they are more darkly colored, have more bone, are thicker in the hides, and not so lively. They are in common a very perfect sort of cattle; for though they have been described as too flat in the rib, and narrow in the chine, these are by no means peculiar faults in them, more than in other sorts of stock; while when too much rounded or flat in the above parts they are great defects, as much weight is lost in the former case, and in the latter there is a want of due thickness in the whole, which renders them deficient in the weight. In oxen of this sort the weight is usually from about 800 to 1,350 pounds and upwards.

The oxen of this kind, are considered chiefly valuable for the purpose of labor, and are not improperly formed for such use, but they have less activity and lightness in their movement than those of the Devon kind, being more strongly made in their shoulders and fore parts.

The cows are not considered large milkers in their native district, but the milk is supposed to be rich and good, both for butter and cheese, but especially the former; and the quantity, on the whole, is more than the average proportion of some districts.

[From the American Turf Register.]

THUMPS—INQUIRY AND ANSWER.

Clarksburg, Feb. 23, 1834.

Mr. Editor—Please make the following inquiries through the medium of your Register.

What is the cause of a disease in horses called thumps? the disease may not be known by that name generally, it may be known however by a noise in the horse similar to the beating of a pheasant, the intervals of each beat longer apart.

What the disease is? what part of the horse is affected?

If there is any cure, what is it?

Will rest relieve? if so, how long? and what treatment best adapted? together with any further information on the subject.

I have examined several Farriers, together with the Register, and have never seen any thing on the subject; I am not fully aware of the consequences of the disease.

By procuring this information, you will confer a favor on many, besides your subscribers here.

Yours respectfully, F. M. WILSON.

Baltimore, June 11, 1834.

Mr. Editor—As Mr. Wilson has propounded several questions, which he desires to be answered through the medium of your Register, and you having solicited answers from me, I cheerfully comply with your request, and would feel myself fully compensated could I know that my effort shall have given satisfaction.

To his first question, I answer, that thumps is the general name by which it is known, and the disease is spasmodic action of the diaphram. In most cases this muscle is the only viscera affected, and whenever this has been the only seat of disease, to which the question relates, I have never known it to kill. But it frequently accompanies inflammation of the bowels; and whenever it is known that they are combined, it will also be known that the patient is in great danger—yet in this state of combined disease, the subject sometimes meets with a fortunate result. Whether it is complicated, or only spasm, the treatment must be the same, i. e. a physic, with loss of blood; with this difference, that if inflammation attends, blood must be more freely taken:—if the subject is a common sized saddle horse, and the disease complicated, take from seven to eight quarts of blood; repeating or not as symptoms dictate. But, if it is only spasm, take from five to six quarts. If the skin is cold, put on six or eight covers.

As your readers may not know when inflammation of the bowels is present, the following symptoms will be their unerring guide: great redness of the conjunctiva, which is the membrane lining the inside of the eyelid, and redness of the gums and tongue, which will be particularly evident on squeezing the tongue. In such examinations comparison may be judiciously made between the diseased subject and healthy ones. The above are symptoms which are not acted on by veterinarians, nor are they mentioned by any author; or if they are noticed, it is done with the least stress of expression, and at the same time labor to describe symptoms which are not definite in character, for they attend both spasm and inflammation of the bowels. The above symptoms of the mouth, simple as they are, are the most characteristic: they are symptoms of inflamed bowels, by which I have been governed for more than twenty years, and I appreciate their dictation more than I do that of the pulse.

Thumps on the first attack is generally the result of severe exertion, which is the exciting cause, but which cause is expedited by some premier cause, which I believe to be some unobserved disease of the alimentary canal. This (to us) latent disease of the bowels, by prolongation of time, together with the duty which the horse is required to perform, often terminates in the loss of a valuable animal. This premier, but inert state of disease, may often be detected by a prudent owner, making himself well acquainted with the general state of his horse; and one of the most important items towards gaining just knowledge on this subject is, to make it a rule at every opportunity to examine the state of the horse's fæces, are they in too small a quantity, or is there on any of the balls a mucus when the quantity is sufficient; the owner may be assured there is an inert disease, and if the time be neglected and any exciting

cause is given, such active disease will ensue as will give much trouble, and of which the owner may think well if a cure is effected.

When the thumps have once existed, however perfect the disease to all appearance may be removed, it commonly returns on severe exertion, and sometimes with moderate use. It is seldom effectually cured.

Believing that in this essay I have given all requisite information, and hoping it may prove useful to owners in assisting them in their efforts to relieve so valuable an animal,

I remain yours, &c.

JOHN HASLAM, *Veter. Surg.*

N. B.—In the above I have said nothing about feeding; but as in this respect it may be thought I am neglectful, I deem it right to state that horses laboring under disease most commonly refuse all food except hay or grass; and as their food is of the most simple kind, if they are disposed to take it I commonly allow a little bran and oats.

I have always deemed it necessary for veterinarians to be strenuous about what the horse shall eat, and for reason of the horse while sick having little desire for food, and that being of the simplest kind. The case between a physician and his patient is far different. J. H.

THE GARDENER.

[From Nutall's Introduction to Botany.]

We have next to proceed to examine the nature of this peculiar juice, as one of the general components of plants.

The Proper Juice.—When a plant is cut through transversely, the proper juice is seen issuing from both divided surfaces, but in greatest quantity from the open orifices of the divided vessels in the part farthest from the root; a fact which is ascribable to the progression of the proper juice being inverse to that of the sap, or from the leaves towards the roots. It is very often mixed with sap, and cannot be distinguished from it by color; but in many instances it is colored or milky. Thus, if a twig of any of the species of Spurge (*Euphorbia*) be cut, the proper juice issues from the wound in the form of a resinous milky emulsion, and may be obtained in considerable quantity. This juice in the majority of plants is, as has been said, colorless; it is, however, yellow in some, as in Celandine (*Chelidonium*); red in others, as in the Bloodroot (*Sanguinaria*,) the Bloody Dock (*Rumex sanguinea*), and the Logwood tree (*Hæmatoxylon*); deep orange in the Artichoke (*Cynara Scholymus*); white, as in the Spurges, the Dandelion (*Leontodon Taraxacum*), the Fig, the Poppy, &c. blue in the root of the Black Burnet-Saxifrage (*Pimpinella nigra*); and green in the Periwinkle (*Vinca*). The color is sometimes changed by exposure to the air. Thus opium, the proper juice of the Poppy, is white and milky when it exudes from the incision, but changes to a yellowish brown hue by exposure to the air. The juice which exudes from incisions in the leaves of the Soccotrine Aloe, yields, by simple exposure, according to the statement of M. Fabroni, a very deep and lively purple dye, so permanent, and resisting so completely the action of acids, alkalies, and oxygen gas, as to offer an useful pigment in miniature painting; or as a dye for silk, which it will effect without the use of any mordant. One of the most remarkable of those milky juices is that which is yielded by the *Cow-tree* of Peru, being employed like milk as a nutritious and agreeable diet: when dry, however, it becomes like wax, acquires a dark color, and proves highly inflammable, like India Rubber.

The proper juice of plants is, *that changed state of the sap, after it has been exposed to the air and light in the leaf, and is returning from it to form the different secretions.* The organs by which the secretion is performed are probably glands; and the secreted fluids themselves are deposited in cells in different parts of the plant, particularly in the bark and the roots; these parts acquiring different medical virtues, from the matters thus lodged in them.

It is almost as impossible to obtain the proper juice of plants free from sap, as it is to procure the sap free from the proper juice; this, however, in the season in which it can be obtained in most abundance, is not so liable to be diluted or mixed with sap as at other times; and therefore it is in the warmest times in summer, that it ought to be taken for the purpose of examining its properties. In an accurate examination of the proper juice of plants, M. Chaptal found, that in no two kinds of plants does it agree, as far as its sensible qualities are considered; but as it is in the leaf that the change from sap into the proper juice occurs, so its sensible qualities are modified according to the action which takes place in that organ; and that this should differ is not surprising, if we consider the great difference in the structure of leaves. In one particular, however, Chaptal found that all the specimens he had examined agreed. When he poured into them oxygenated muriatic acid, a very considerable white precipitate fell down; which had the appearance of fine starch, when washed and dried, and did not change when kept for a length of time. It was insoluble in water, and not affected by alkalies. Two thirds of it were dissolved in heated alcohol; and these were evidently resinous, as they were again precipitated from the spirituous solvent by water. The third part, which continued insoluble in both alcohol and water, was found to possess all the properties of the ligneous fibre. In the seed lobes a greater quantity of this woody fibre was found than in the proper juice of the plant itself; a fact which accounts for the rapid growth and increase of parts of the young plant, before the roots are able to take up from the earth the principles of nutriment. The proper juices of plants, both in the seed, and in the perfected plant, contain nourishment already adapted for assimilation into the substance of the plant. But this preparation takes place either during the time, or after the sap has been exposed to the action of the light and air in the leaf; as no woody fibre is found in the ascending sap, although the principles of it are undoubtedly contained in that fluid. A new chemical combination of these principles takes place; but how this is effected, or by what means the change is produced, we know not; and it is one of those mysteries of nature, from which human ingenuity will never, perhaps, be able to remove the veil. In the same manner the blood of animals contains the components of the muscular fibres already formed; and an assimilation of it is constantly going on, without our being able to perceive it, or even to form the most distant conception of the manner in which it is performed.

The elementary principles of the proper juice of plants, and of the sap, are the same; but differ in the relative proportions. These elements are carbon, hydrogen, and oxygen. The same principles, differently modified, form all the secretions and the solid materials of the plant itself. The extraneous ingredients which some plants are found to contain, as part of their substance, such as the alkaline and neutral salts, metalic oxyds, silex, and other earths, are often probably obtained ready formed in the soil, in a state of division sufficiently minute to be suspended in water, and taken in by the absorbent vessels of the roots. This is in some degree proved by the effect of change of situation on plants which naturally grow near the sea; for most of these, when burnt, yield soda; but when they are removed from the sea-shore, and cultivated in an inland situation, potash instead of soda is procured from their ashes. Still, the siliceous epidermis of Grasses and Canes, and the flinty liquor sometimes found in the culms of the latter, can scarcely be produced in any other manner than by proper vegetable assimilation thus depositing silex from its unknown elements. As the sap undergoes the same exposure to the air and light in all plants, and one product only can be formed in each plant by this exposure, the difference of the proper juice in different plants, is a strong argument in favor of the existence of vegetable glands, independent of the undeniable proof afforded by the formation of the very different products which are deposited in different parts of the same plant. Unless there were glandular organs, one product only could be produced in each plant by the function of the leaves, and the action of light and of air on the sap. The secretions of plants formed from the proper juice are very numerous, and known under the names of *gum*, *fecula* or *starch*, *sugar*, *gluten*, *albumen*, *gelatin*, *caoutchouc* or *India Rubber*, *wax*, *fixed oil*, *volatile oil*, *camphor*, *resin*, *gum resin*, *balsam*, *extract*, *tannin*, *acids*, *aroma*, the *bitter*, the *acrid*, and the *narcotic principles*, and *ligneous fibre*. These are found in different parts of plants, without any uniformity of distribution; and although so numerous and different from each other in their sensible qualities and chemical properties, yet are they all composed of different modifications of the same elements, Carbon, Hydrogen, and Oxygen. Thus 100 parts of *gum*, according to the experiments of Gay-Lussac and Thenard, consist of

42.23 of carbon,
6.93 of hydrogen, and
50.84 of oxygen; the oxygen and hydrogen being nearly in the same relative proportion as in water.
100.00

100 parts of common *resin* consist of
75.944 of carbon,
15.156 of a combination of oxygen and hydrogen in the same proportions as they exist in water, and
8.900 of hydrogen in excess.
100.00

100 parts of *olive oil* consist of
77.213 of carbon,
10.712 oxygen and hydrogen, as in water, and
12.065 of hydrogen in excess.

100.00

The solids, also, except the earths and salts, are formed from the same principles. 100 parts of the ligneous fibre of the Beech and Oak, for example, consist of

	Beech.	Oak.
Carbon	51.45	52.53
Oxygen	42.73	41.78
Hydrogen	5.82	5.69
	100.00	100.00

and thus almost the whole of vegetable matter may be resolved into these three simple elements.

Such are the general components of vegetables, differing materially from animals in the *absence* of Azote, which being insoluble in water, never probably constitutes any part of their food.

MISCELLANEOUS.

The Weather.—The following article is from the pen of the celebrated Dr. Adam Clarke. It is not unworthy of attention.

From my earliest childhood I was bred upon a little farm, which I was taught to care for and cultivate ever since I was able to spring the rattle, use the whip, manage the sickle, or handle the spade; and as I found that much of our success depended on a proper knowledge and management of the weather, I was led to study it ever since I was eight years of age. I believe meteorology is a natural science, and one of the first that is studied; and that every child in the country makes, untaught, some progress in it: at least so it was with me. I had actually learned, by silent observation, to form good conjectures concerning the coming weather, and, on this head, to teach wisdom to those who were perfect, especially among such as had not been obliged, like me, to watch earnestly, that what was so necessary to the *family support* should not be spoiled by the weather before it was housed. Many a time, even in tender youth, have I watched the heavens with anxiety, examined the different appearances of the morning and evening sun, the phases of the moon, the scintillation of the stars, the course and color of the clouds, the flight of the crow and swallow, the gambols of the colt, the fluttering of the ducks, and the loud screams of the seamew—not forgetting the hue and croaking of the frogs. From the little knowledge I had derived from close observation, I often ventured to direct our agricultural operations in reference to the coming days, and was seldom much mistaken in my reckoning.

About twenty years ago, a table, purporting to be the work of the late Dr. Herschel, was variously published, professing to form prognostics of the weather, by the times of change, full and quarters of the moon. I have carefully consulted this table for several years, and was amazed at its general accuracy:—for though long, as you have seen, engaged in the study of the weather, I never thought that any rules could be devised liable to so few exceptions. I have made a little alteration in the arrangements, illustrated it with further observations, and have sent it that you may insert it, as it has hitherto been confined generally to a few almanacs.

A TABLE

For foretelling the Weather through all the Lunations of each Year, forever.

This table and the accompanying remarks are the result of many years actual observation; the whole being constructed on a due consideration of the attraction of the sun and moon, in their several positions respecting the earth, and will, by simple inspection, show the observer what kind of weather will most probably follow the entrance of the moon into any of its quarters, and that so near the truth as to be seldom or never found to fail.

If the New Moon—the First Quarter—the Full Moon, or the Last Quarter happens			
MOON.	TIME OF CHANGE.	IN SUMMER.	IN WINTER.
	Between midnight and two in morning,	Fair.	Hard Frost, unless the wind be South or West.
	2 and 4 morning,	Cold, with frequent Showers.	Snow and stormy.
	4 and 6 "	Rain.	Rain.
	6 and 8 "	Wind and Rain.	Stormy.
	8 and 10 "	Changeable.	Cold Rain if wind be W.
	10 and 12 "	Frequent Showers.	Snow if east.
	At 12 o'clock at noon,	Very Rainy.	Cold and High Wind.
	Between 2 & 4 afternoon	Changeable.	Snow or Rain.
	4 and 6 "	Fair.	Fair and Mild.
	6 and 8 "	Fair if wind N. W.	Fair.
	8 and 10 "	Rainy if South or S.W.	Fair and Frosty if wind north or northeast.
	10 and midnight,	Ditto.	Rain or Snow if S. or S.W.
		Fair.	Ditto.
			Fair and Frosty.

Observations.—1. The nearer the time of the Moon's Change, First Quarter, Full and Last Quarter, are to *midnight*, the fairer will the weather be during the seven days following.

2. The space for this calculation occupies from ten at night till two next morning.

3. The nearer to *mid-day* or *noon*, the phases of the Moon happen, the more foul or wet weather may be expected during the next seven days.

4. The space for this calculation occupies from ten in the forenoon to two in the afternoon.—These observations refer principally to the Summer, though they affect Spring and Autumn nearly in the same ratio.

5. The Moon's Change—First Quarter—Full—and Last Quarter, happening during six of the afternoon hours, *i. e.* from four to ten, may be allowed by fair weather; but this is mostly dependent on the *wind*, as is noted in the table.

6. Though the weather, from a variety of irregular causes, is more uncertain in the latter part of Autumn, the whole of Winter, and the beginning of Spring; yet in the main, the above observations will apply to those periods also.

7. To prognosticate correctly, especially in those cases where the *wind* is concerned, the observer should be within sight of a good *vane*, where the four cardinal points of the heavens are correctly placed. With this precaution he will scarcely ever be deceived in depending on the table.

Such is the disinfecting and purifying nature of the Chloride of Soda, that the writer saw a neat's tongue, last Friday, taken from a pickle tub in a tainted and offensive condition, and after being washed in several tubs of pure water, and soaked in pure water for hours, it still retained its offensiveness, when a wine glass full of fresh Chloride of Soda was poured into one quart of water, and the tainted tongue washed therein for five minutes, and it became as sweet as though just taken warm from the creature's mouth; the same tongue was then washed in pure water and boiled, and a sweeter piece of meat was never served upon any table.

At this time the writer was suffering from an inflamed and swollen cheek, in consequence of a decayed tooth; it occurred to him to try the experiment on his face, he accordingly took one tea spoonful with twenty of pure water, and with a soft brush washing the inside of his cheek and the whole mouth therewith, it soon relieved the pain, and allayed the inflamation, and the swelling gradually subsided. I do not say that every thing called the Chloride of Soda will perform these things, but this was fresh made, by an excellent chemist.—*Philadelphia U. S. Gazette.*

The "*Republic of Letters*" is the title of a new literary enterprise, commenced in New York, of which the first number is before us, as a specimen. It is a quarto of sixteen pages, "got up" in a beautiful style, as to paper, type, and press work, and contains the whole of Mackenzie's celebrated tale, "The Man of Feeling," and part of the "Vicar of Wakefield"—for the sum of *six cents*. It is impossible for competition to go on much farther, in reducing the price of the classics. At this rate a man may, in these temperance times, have the contents of a whole library of the past generation, which would have cost his father the price of a farm, for what he can retrench out of his father's bill for liquors. Books, and the best of books, are brought within the reach of every one.

CONTENTS OF THIS NUMBER.

Pennsylvania Farmer, a new agricultural periodical—Hogs; Mackay breed—Maryland Horticultural Society's report—State of the Cotton Market in Havre—A successful Experiment—Agricultural Chemistry—Farm Accounts—Gama Grass—Culture of Rape Seed for oil—Youatt's 3d lecture continued; the Vomer; the Æthmoid Bones—Dixon's description of the Sussex and Hereford varieties of Cattle—Thumps in horses—The proper juice in plants—Observations on the weather by Dr. Clarke—Chloride of Soda—Republic of Letters; a new literary work—Prices Current—Advertisements.

BALTIMORE PRODUCE MARKET.

☞ *These Prices are carefully corrected every* MONDAY.

	PER.	FROM	TO
BRANDY, Apple,	gallon.	$0 27	$—
Peach,	"	75	—
BEANS, white field,	bushel.	2 00	—
BEEF, on the hoof,	100lbs.	5 00	5 75
CORN, yellow,	bushel.	66	68
White,	"	66	68
COTTON, Virginia,	pound.	10	13
North Carolina,	"	11	13
Upland,	"	14	15
FEATHERS,	pound.	—	37
FLAXSEED,	bushel.	1 00	1 25
FLOUR—Best white wheat family,	barrel.	6 75	7 25
Do. do. baker's	"	6 25	6 75
Do. do. Superfine,	"	5 37	5 50
Super Howard street,	"	5 12	5 —
" " wagon price,	"	5 00	—75
City Mills, extra,	"	5 50	5 37
Do.	"	5 37	5 50
Susquehanna,	"	5 25	—
Rye,	"	3 37	—
GRASS SEEDS, red Clover,	bushel.	—	4 50
Timothy (herds of the north)	"	3 50	—
Orchard,	"	3 00	—
Tall meadow Oat,	"	2 50	—
Herds, or red top,	"	1 25	—
HAY, in bulk,	ton.	14 00	15 00
Pressed,	100 lbs	—	90
HEMP, country, dew rotted,	pound.	6	7
" water rotted,	"	7	8
LIME,	bushel.	30	35
MUSTARD SEED, Foreign,	"	4 50	5 00
Domestic,	"	5 00	—
OATS,	"	30	32
OIL, linseed,	gallon.	—	90
Castor	"	1 70	1 80
PEAS, red eye,	bushel.	—	—
Black eye,	"	—	1 00
Lady,	"	—	—
PLASTER PARIS, in the stone,	ton.	3 00	—
Ground,	barrel.	1 37	—
PALMA CHRISTA BEAN,	bushel.	2 00	—
RAGS,	pound.	3	4
RYE,	bushel.	62	—
TOBACCO, crop, common,	100 lbs	3 50	5 00
" brown and red,	"	4 50	6 00
" fine red,	"	6 00	8 00
" wrappery, suitable for segars,	"	6 00	12 00
" yellow and red,	"	8 00	12 00
" yellow,	"	13 00	17 00
" fine yellow,	"	15 00	22 00
Seconds, as in quality,	"	4 00	5 00
" ground leaf,	"	5 00	9 00
Virginia,	"	4 00	—
Rappahannock,	"	3 00	4 00
Kentucky,	"	4 00	8 00
WHEAT, white,	bushel.	1 10	1 14
Red,	"	1 00	1 08
WHISKEY, 1st pf. in bbls.	gallon.	28	29
" in hhds.	"	26	—
" wagon price,	"		—
WAGON FREIGHTS, to Pittsburgh,	100 lbs	1 25	—
To Wheeling,	"	1 50	—
		washed.	*unwash*
WOOL, Prime & Saxon Fleeces,	pound.	50 *to* 60	24 *to* 26
Full Merino,	"	40 50	20 24
Three fourths Merino,	"	33 40	22 24
One half do.	"	28 33	21 22
Common & one fourth Meri.	"	25 28	18 20
Pulled,	"	28 31	18 20

Business a little more brisk in the article of Wool.

UNDERGROUND TURNIP.

THIS turnip is represented as able to resist frost in an extraordinary degree. (See description of it in the first page of this No.) For sale at the American Farmer Establishment. Price $1 per pound. jy 8

CUBA TOBACCO SEED.

JUST received from Matanzas, a few ounces of the true Cuba Tobacco Seed, from *la Vuelta Abajo*, warranted in prime order—Price $1.00 per ounce.

I. I. HITCHCOCK.

BALTIMORE PROVISION MARKET.

	PER.	FROM.	TO.
APPLES,	bushel.	$0 62	$—
BACON, hams,	pound.	11	—
Shoulders,	"	—	9
Middlings,	"	—	10
BUTTER, printed, in lbs. & half lbs.	"	31	—
Roll,	"	12	18
CIDER,	barrel.	—	—
CALVES, three to six weeks old	each.	4 00	7 00
COWS, new milch,	"	15 00	27 00
Dry,	"	9 00	12 00
CORN MEAL, for family use,	100lbs.	1 62	1 75
CHOP RYE,	"	—	1 62
EGGS,	dozen.	9	—
FISH, Shad, trimmed		—	—
" salted,	barrel.	6 37	—
Herrings, salted, No. 1 & 2,	"	3 87	4 00
Mackerel, No. 1, 2 & 3,	"	3 75	6 25
Cod, salted,	cwt.	—	2 75
LAMBS, alive,	each.	1 25	2 00
Slaughtered,	quart'r	31	50
LARD,	pound.	8	—
ONIONS,	bushel.	—	75
POULTRY, Fowls,	dozen.	—	—
Chickens,	"	2 25	2 50
Ducks,	"	—	2 50
POTATOES, Irish,	bushel.	—	62
New,	peck.	—	—
VEAL, fore quarters,	pound.	6	—
Hind do.	"	8	—

ADVERTISEMENTS.

SEED WHEAT, RYE, &c.

THE subscriber offers his services for the procurement of Seed Wheat, Rye, &c. for those who shall provide funds in Baltimore for that purpose. He does not keep those articles on hand, and therefore can send them to those only who furnish him with the *means in advance*. For all such, however, he will use his best judgment to procure such grain as shall be ordered, charging a small commission for his agency.

I. I. HITCHCOCK,
Amer. Farm. Estab.

Note—I. I. H. has made arrangements for procuring for cash, Seed Grain of the very first quality, from some of the best farms in Maryland. aug. 12

A JACKASS.

FOR SALE—A fine Jack, recently imported from Buenos Ayres, by an officer of the Navy, to whom he was presented under circumstances which render it certain that he was there considered a very valuable animal of the best blood and qualities of that country, which is famous for its fine mules. He is of middling size, between 12 and 13 hands high, only five years old, and as handsome *as any other Jackass*. The present owner having no use for him, will be glad to put him where he will be beneficial to the Agricultural interest of the country, and with that view offers to sell him for $500. Application (post paid) must be made to

I. I. HITCHCOCK,
aug. 12 Amer. Far. Estab.

A MARE IN EXCHANGE FOR CATTLE.

A GENTLEMAN of Virginia is desirous of exchanging a valuable blooded brood Mare for thorough bred Durham short horn Cattle—for sheep of the best blood, or for a good Jackass. Should any gentleman be disposed to make such a barter, he shall receive further information on application to I. I. HITCHCOCK,
aug. 12 Amer. Farm. Estab.

GRAY OR GAZE HOUNDS.

LAST September, I received from the President of the United States, for the breeding farm of this Establishment, a pair of these very beautiful and powerful animals, which had been sent out to him from Holland, by the American Consul there, and in vol. 15, of the American Farmer, page 233, I published the letter accompanying the very acceptable present. I have now the satisfaction to offer for sale four (female) puppies—their issue. They will be ready for delivery in all the month of July. Price $20 each.

I. I. HITCHCOCK,
American Farmer Establishment.

WESTPHALIA GEESE.

A FEW pairs of these unrivalled Geese for sale at this establishment. They were hatched in April last, and are *now* considerably heavier than old geese of the common breed.

These geese are of the purest white, with bills, legs and eyes of a bright scarlet color. Geese of this breed have attained the enormous weight of 20 pounds, and those now offered for sale are for their age equal to any both in beauty and size that we have ever seen—Price $5, a pair. They can be sent safely in coops or crates any distance. july 29

NEW LEICESTER BUCKS.

I AM authorised to sell several fine Bucks of the Leicester or improved Bakewell breed of Sheep, and one do of the Cotswold breed, at from $75 to $100 each. Who will have one or more? I. I HITCHCOCK,
July 15. American Farmer Establishment.

THE COMPLETE FARMER.

JUST PUBLISHED and for sale at this establishment, price $1, "The Complete Farmer and Rural Economist, containing a Compendious epitome of the most important branches of Agriculture, and Rural Economy. By Thomas G Fessenden, Editor of the New England Farmer." "Agriculture is the art of arts: without it man must be a savage, and the world a wilderness." june 24

A SUPERIOR JACK FOR SALE.

FOR SALE, by a farmer in this state, a splendid Maltese Jack, *first rate in every respect*. He is *nearly* 14½ hands high!—Eight years old last spring; quick in performance, and *efficient* to an unusal degree. 31 mares out of 34 in one instance, and in another 8 out of 9 mares belonging to one farmer proving with foal by him in 1833. He is probably in every respect one of the best Jacks ever imported into the United States. Price $1000. Address

I. I. HITCHCOCK,
jy 29 Amer. Farmer Establishment.

DEVON CATTLE.

THE subscriber has the selling of a considerable number and variety of these valuable cattle at prices *unusually low*, viz: Bulls from 75 to $100; Cows and Heifers from 60 to $80, and Calves, one year old and less, from 40 to $60. More particular information may be had by application to I. I. HITCHCOCK,
May 9. American Farmer Establishment.

THE 7-8 SHORT HORN DURHAM BULL "DUKE" IS FOR SALE.

DUKE is 2 years old, red and white, by Parson, dam Isabella; Parson is by Bishop, dam, Moss Rose, (imported in 1821, bred by Mr. Ashcroft,) got by Phenomenon—Isabella is by the celebrated imported bull Lothario, dam, Meg, by Billy Austin. Duke is of uncommon fine size and figure, pronounced by judges to have every point and appearance of a full bred. Price (to suit the times) $150.

Also—Several 3-4 blood HEIFERS, with their first calves, will be disposed of at $100 each. Application to be made (post paid) to I. I. HITCHCOCK,
May 30 American Farmer Establishment.

SKINLESS OATS.

A VERY small quantity of this celebrated new article has been obtained, at an enormous expense, and will be disposed of at this Establishment, at 50 cents per ounce. But as my stock of Gama Grass Seed is for the present, exhausted, I shall substitute this article as a return, to all subscribers to the Farmer & Gardener, on payment of their subscription. (See terms)

I. I. HITCHCOCK,
July 29. Amer. Far. Estab.

☞ See an account of this article on the first page of number 13.

TURNIP SPINACH & CABBAGE SEED.

A FULL supply of these seeds of several of the best varieties for summer and fall sowing, now on hand and for sale by I. I. HITCHCOCK,
july 1 Amer. Farm. Estab.

THE FARMER & GARDENER;

AND LIVE-STOCK BREEDER & MANAGER.

CONDUCTED BY I. IRVINE HITCHCOCK, AND ISSUED EVERY TUESDAY FROM THE AMERICAN FARMER ESTABLISHMENT, AT $5 PER ANNUM, IN ADVANCE.

No. 16. **BALTIMORE, AUGUST 19, 1834.** **Vol. I.**

☞THIS publication is the *successor* of the late

AMERICAN FARMER,

(which is discontinued,) and is published at the same office, at five dollars per year, payable in advance.

☞When this is done, 50 cents worth of any kind of seeds on hand will be delivered or sent to the order of the subscriber with his receipt.

American Farmer Establishment.

BALTIMORE: TUESDAY, AUGUST 19, 1834.

WANTED—The numbers of the Farmer & Gardener subsequent to No. 5. Our files of these Nos. are running low, and we will thank all postmasters who have any of them lying "dead" in their offices, to return them to us.

PENNSYLVANIA HORTICULTURAL SOCIETY.

We are requested to state that the exhibition of this society, will be held in Philadelphia, on Wednesday and Thursday, the 17th and 18th of September next, and that contributions thereto are solicited of fine specimens of fruits, flowers and culinary vegetables. We heartily commend this society and its exhibition to the favorable regard of the opulent and the liberal, and to all lovers of Horticulture.

RAPE SEED OIL.—In our last number, we published an extract from the Franklin Journal, giving an account of a crop of rape seed cultivated in Salem County, N. J., which points out that article as one highly worthy of the farmer's notice.

It is there stated, that from 2½ to 3 gallons of this oil is used for every hundred pounds of wool that is manufactured into cloth; and it is known that the oil from rape seed is principally used for that purpose in the manufactories of Europe, while in this country the more expensive olive oil, we believe, is substituted in its stead.

It will shew the importance of this crop to our farmers, as well as to our woollen manufacturers, if we calculate the quantity consumed for this purpose in the United States. It has been estimated that 60,000,000 pounds of wool are annually raised in this country, and that one fourth is added to that amount (15,000,000 lbs.) by importation, making a grand total of seventy-five millions of pounds of wool, for the annual consumption. Dividing this wool into parcels of 100 pounds each, it will make 750,000 parcels, each of which will consume, we will say 2½ gallons of oil, when manufactured, making 1,875,000 galls. —divide that sum by 3½, the quantity in galls. of oil in one bushel of seed will give the quantity of seed required to produce the oil in question, 535,714 bushels—and at 22 bushels per acre, as is given in the crop referred to, would require 24,350 acres to produce it. At the price which the oil is sold for in the case given, that is, $1,30 per gall. the whole quantity consumed in the U. S. in manufacturing wool, amounts annually to $2,347,500. This appears to be an object well worth the attention of the farmer.—We will recur to it again in a future number.

POINTERS.—The following extract of a letter from a gentleman to whom was sent from the breeding farm of this Establishment, some weeks ago, a young pointer dog, is one among the many of the testimonials we have received of the excellence of the breed we possess.

AUGUSTA, GA. August 6th, 1834.

DEAR SIR.—Having recommended particularly to a sportsman and a friend of mine, the blood, breed, &c. of the pointer you sent me, he wishes to know whether you have still on hand his brother, which you mentioned, and if so, please inform me immediately, at the same time you may please consider him sold. I am so far satisfied with the dispositions of mine, but think him rather small for a dog eight months old.

He goes into the water as well as any water dog I have ever known.

MARYLAND HORTICULTURAL SOCIETY,

August 16, 1834.

Mr. Thomas Dixon presented a dozen and a half of very fine Tomatoes.

Mr. Robert Sinclair, Sen. presented a very fine, long green Cucumber, 14 inches in length.

Mr. Waters presented three varieties of Plums, of excellent quality.

Mr. John Feast exhibited a cluster of the Clintonia Rose; Vitus-agnus Castus, Chaste tree, Ilebiscus, from seed; Lobelia splendens, Convolvulus tricolor; Clemalis Virginica, Sempervivum vulgaris, Lythrum Salicaria.

Mr. Robert Sinclair exhibited a five double Althea, the tricolor.

Capt. W. P. Matthews, of Chestertown, exhibited a Garden Leek, in seed, of extraordinary size.

A number of persons, it will be recollected, were made sick by partaking of a custard at the wedding of a lady at Louisville. Poison was supposed to have been contained in them. The affair has not yet been solved. Two members of the family have come out with a detail of the facts in the papers of that place, in which they state that the custards were made by a sister. After having made one with which she was displeased, she made another, both of which were cooked in a bell metal kettle. They were made alike, and there was nothing in the composition of either but the usual ingredients. In the first, loaf sugar was used; in the second brown. The first was then put into a tin vessel, and the vessel not being sufficiently capacious to contain the whole of it, the remainder—enough, perhaps, to have filled a tea cup—was handed to a member of the family, who ate of it herself, and gave some to a servant standing near her. Neither of them was sick from the effects of it. The tin-vessel was set in the dairy-room, with ice around it, and the contents were not used until the next day, when the custard although curdled was not sour. It was then distributed at the houses of the relations of the family; and all who partook of it died or were sick. The unfortunate deceased were the mother, Mrs. Foster and child, Mrs. Fontaine, Miss Venarsdol, a child of Milton Buckner, and two negro boys.

GERMAN EMIGRANTS.—From the official returns made by the Health officer to the Board of Health, it appears that during the last three months the total number of passengers arrived in Baltimore was *four thousand four hundred and ninety one, viz:*

May,	Foreigners	847	Citizens	76,	Total	923
June	"	1618	"	135	"	1753
July	"	1744	"	71	"	1815
						4491

STEAM COMMUNICATION WITH SUEZ.—From our foreign papers we learn, (says the N Y. Mercantile Advertiser) that effectual measures have been taken to form this communication, both from Bombay and Bengal. One trip will be made each quarter of the year. It is supposed that the maximum of each *passage* will be 40 days, minimum 30 days. Steamboats will be employed.

Eggs are hatched at 104° of heat.

SPONTANEOUS COMBUSTION.—In delivering a quantity of rags from the cellar of the store, 24 Broad st., it was discovered that the mass was on fire. The rags were chiefly cotton, and oil had been spilt upon them. But for this timely discovery the store, which is large and full of goods would probably have been consumed.—*City Paper.*

THE FARMER.

Agricultural Chemistry.—The first object that presents itself for the consideration of the student in the science of agriculture, is gas; which may be defined to be, *all permanently elastic fluids*, except the atmosphere.

Steam is only a mechanical division of water, the particles of which are separated by caloric, or heat; but no chemical union has in that state taken place between the particles, and as soon as the temperature is reduced the laws of affinity prevail between the separated particles, and it regains its former state of water. Not so of gas, it retains its elastic form under all degrees of temperature.

It is a fact now sufficiently ascertained, that the food of plants must be reduced into this state before it can be received into the vegetable mass. In the bowels of the earth, the manure is reduced by fermentation into a state of gas, and being mixed with the water in the soil, is then absorbed by the roots of plants, and carried into the circulation forming the sap. Different kinds of earth being discovered in the remains of vegetables, does not militate against this doctrine, for the earths and metals are likewise formed by a union of the same gases, combined with their peculiar bases, which are volatile. Clay, sand, and lime, are composed, as we shall hereafter show, by the combinatian of oxygen gas, with the peculiar metalic bases which form these several earths. If then we may be permitted to suppose that the matter of these several bases, which are known to be extremely volatile, are present in the circulating sap, and we do not see why that supposition may not as well be indulged in as any others that are adopted, we shall then have present all the constituent principles of the earths, in a gaseous state; and by simply obeying the laws of affinity their particles will unite and compose the different earths within the vegetable substance.

The constituent principles of vegetable matter are very simple, and are reduced principally to these three, oxygen gas, hydrogen gas, and carbonic acid gas. To these three principles merely, all vegetable substances may be reduced.

All that endless variety of appearances, which presents itself in the vegetable kingdom; the stately oak, and the tender daisy; the hardy lignum-vitæ, and the pulpy mushroom; the poisonous upas, and the healing balm; the nauseous assafœtida, and the sweet-scented rose; together with all the various colors, shades, and tints, presented to us in the flowers and foliage which cover the earth, have all been composed from the three gases we have mentioned. Not only in these different vegetables separately, do they compose such opposite substances, but from the same trunk, and from the same apparently homogenious mass of sap, are compounded substances as opposte in their qualities as any that have been mentioned:—for instance, the seed of the stupifying poppy produces an oil as bland as the olive, and it is cultivated in great quantities in France for table use; while from the milky juice extracted from its head, is produced the opium of our shops: and the delicious pulp of the peach, encloses in its kernel a poison as deadly as arsenic.

All these various results are occasioned by a slight variation in the combination of these gases.

In our next number we will endeavor to show some of the properties of oxygen in the process of vegetation.

Gama Grass.

Alabama, July 10, 1834.

To the Editor of the Farmer & Gardener:

Sir:—With much interest I read in your valuable "Farmer" of the 24th of June, a communication on the subject of the Gama Grass, from a gentleman who deservedly stands distinguished in S. Carolina as an enterprising and spirited agriculturist.—Having had the good fortune to give an impulse to the ball, I feel really gratified to see it going on successfully, receiving its farther direction from the hands of intelligence and patriotism.—Of the extraordinary value of this vegetable production, I believe there now remains no doubt; while the slight difference of opinion as to its relative value, will be productive of the happy effect of producing well conducted experiments, that must end in settling its real and intrinsic worth to the farmers and planters, especially of the southern section of the Union.

Previous to my making my first communication to the public, I confess I felt no inconsiderable degree of disagreeable anticipations. I know a little of the ignorance, and the scoffs of self-importance, so often exhibited by a class of men who appear to live for the sole purpose of treating with contempt every essay to effect a general good; who find the "summum bonum" to take care of self, and by never attempting anything, *prudently*, run no risk of failure and ridicule.

Scarcely had my first communication appeared in the "Mobile Register," when it had to encounter a most pointed rebuff, and indeed, for what appeared to me a strange reason, arrested for some time the effect of it. The difficulty of eradicating what was extremely difficult to get into existence, I could not conceive could be great, especially a plant as readily distinguished at a hundred feet distance, during the first year of its growth, as a cuckle bur, and which then can be readily plucked up by the hand.

The result of the different trials made of this grass in North and South Carolina, and in Georgia, has been to me truly gratifying; and not less the fact, that it is found contrary to my first expectations in each of those states; and I now with cheerfulness and much pleasure correct my first suggestions, that it was found only in the prairies of the south and west; and am happy to be able to state that it has been found in Alabama and Mississippi; on the river lands of the Alabama and Tombigbe, as also on the limestone formations, the prairies, &c.; and in two cases it has been found in boggy swamp land, most luxuriant. I planted it on a partially drained reed brake not sufficient for the weight of a wagon and team, and it grew well; and now I am assured a loaded wagon could pass over the spot safely. In no case, however, have I found the luxuriance of growth equal to that procured by cultivation on even pine land, manured.

I acknowledge, also, that I was alarmed at my own accounts of its production, and indeed, was only relieved by the fairly conducted trials made elsewhere, and given to the country through the medium of the public prints, in which my statements were fully sustained, although I could not help noticing that a most accurate and respectable agriculturist of the south early endeavored to check a too great luxuriance of public expectation by a modest hint that I might be found too sanguine. To all this I replied to myself, "nous verrons"—we shall see. I knew what was before me—it was not fancy with me, but fact.

Having in my possession the first, and oldest bed of this grass cultivated; and having begun early to test, by experience, its relative value, I will again repeat, that as regards its nutritious qualities, I must claim for it a higher rank than corn blades. The following experiments determine the point with me. With this grass alone and as much salt as the animals would consume, I fed two mules fourteen days, twelve of which they ginned two thousand pounds of seed cotton per day, and at the end of that period it was determined by competent judges that they had retained their flesh. They had as much as they could stand by. Now sir, I know, from a trial made through necessity, that I could not have done this with corn blades. I fed a horse of a large size for the same period on this grass, allowing eight ears of corn per day. This horse I rode daily from 5 to 15 miles—he evidently retained his flesh. I worked a pair of oxen regularly for two weeks, fed on this grass exclusively, with salt; they mended. In every case I gave as much as the animals could eat.

For the purpose of ascertaining its value in the production of *milk and butter*, two articles so essential to comfortable living, I put up two milch cows in a bare lot, and fed on it exclusively for two weeks. The milk, I am satisfied, was not as much increased as some other grasses would have effected, but I am assured that with the exception of feeding on *blue grass or white clover*, *I* never found milk or butter equal:—it certainly produces a rich milk. Of those four experiments I am satisfied myself. The grass fed away in making them was at thirty days growth, with the exception of that given to the cows. The first I cut from 2½ to 3½ feet high. For the milch cows I cut at fifteen days growth, 18 to 24 inches. I regret that no gentleman has yet tried the effect on *milk and butter, at fifteen days growth.* When the trial is made, let an *epicure* determine, and he will pronounce both exquisitely delicate.

AGRICOLA.

Important to Agriculturists—Turnip Fly.—The turnip fly is not always of one kind, but the difference in them is not very important, for they only alter in their paint, their build is always alike. The most common is bottle green, but in some fields all are painted black, with a white line on each side from stem to stern down the neck. They are so active, that the only way in which I could ever obtain them in newly sown fields, was by sweeping the surface with a gauze net, on an iron hoop at the end of a strongish stock. They jump like flees as they see you. This insect, or rather its grub, commences its attack on the turnip as soon as it is up, devouring the two cotyledons and the little heart, and sometimes in a few days leaving the field as brown as it was on the day it was sown. Schemes without number have been tried to get rid of or kill this little pest wherever it has appeared. I have always observed the greatest quantity of grubs on very young plants; they are very various in size, and it is not before the plants are a fortnight or three weeks old, that the beetles appear in any quantities. Yet there are some beetles observed at the first coming up of the plants. Now I know from experience, that the turnip fly feeds on wild mustard, and several other hedge plants, and therefore it is not improbable, that when they smell the fragrance of the fresh bursting cotyledons of their favorite food, they would skip down from their spring habitations, the hedges, and make the attack. I first sowed some seed in a flower pot, with earth out of my garden; it produced the animal in abundance. Secondly, I enclosed the pot with paste-board and canvass, with the same success; but still there was a possibility of the enemy getting in, as I had not the cover sufficiently close. Thirdly, I made a light frame about eight inches square, covered it with very fine silk gauze, carefully stopping the crevices of the door with pasted paper, and round the pot where the cover was fastened on with putty, so that there was no possibility of any thing coming to it from without. Yet this experiment was attended with the same success; except that one point, a negative point, was now proved, namely, that the fly did not come to the turnip from other plants, and this was a point gained. Fourthly, I baked the earth in a cast-iron pot over the fire, and used no other water to water the seed but such as I had boiled myself, applying it at the bottom of the pot with a common feeder. Then I exercised the same care, and took the same precautions as before. I did not take off the cover till the plants were of a considerable size, and I found them all a-hop with beetles. I had now made another step; having before found that the beetles did not come from other plants, it was clear that it was not in the earth or the water. Fifthly, with a lens I examined the seed and found on it a number of white flattish substances; some of the seeds were without any, but there was generally one, two, three, four, and in one instance, five, on a single seed. These I concluded were eggs, and I thought the only way left me to attack them. It would have been easy enough to poke them off with a needle, but I could not see how I was to employ a needle and a magnifying glass on a sack of turnip seed. I therefore made some pretty strong brine, and soaked the seed in it for twenty-four hours, then dried it thoroughly, and with all the precaution which I have mentioned, I sowed it again, and there was not a single fly, neither was there a single turnip injured. I tried again and again, and I found that without weakening the brine, if the seeds were only kept in it three hours, there were no beetles, but yet the seed came up as well as ever. I now practice this method with turnip seed, cabbage seed, and in fact with all the cruciform plants in common cultivation, with very satisfactory success. The whole of these experiments were made on the Swedish turnip, which is generally more infested by these beetles than any of the other sorts.—*Entomological Magazine.*

We some time ago mentioned, in regard to avoiding the attacks of the turnip fly, that a farmer completely succeeded in avoiding them for many years, by rubbing, keeping, and sowing his turnip seed among flour of sulphur. Since the turnip insect is attached to the seed, it is clear that the sulphur must have destroyed them. This attachment of the nidus of the insect to the seed is a very remarkable circumstance, and requires farther investigation than the experiments above related, to establish the fact as a general one.—*Editor of the Quarterly Journal of Agriculture.*

Nantucket Sheep Shearing.—A correspondent of the Boston Courier thus describes the late annual festival of sheep shearing on the Island of Nantucket. The number of sheep is about ten thousand, and they are all collected into a great pen at Miacomet, the site of an old Indian village, about two miles from the village of Nantucket. The sheep are all marked, and each shearer goes into the pen and selects those that bear his own mark. The village is all in a bustle, and the road to the pen is full of green one horse carts laden with passengers, going to and returning from the shearing. Tents are erected on the common near the pen, where many things, good and bad, are for sale; and where money is sheared from the pockets of the boys and others.

The writer says the fleeces average about three pounds, and that purchasers on the spot pay four shillings a pound for the wool. The Merino brings more, but there is not much of this on the island.

A New Invention.—The Taunton, Massachusetts, Whig, states that a gentleman in Boston, who owns a large chemical establishment, has discovered a new species of fire, which produces a most intense heat. It is produced by the mixture of tar and water. With this kind of fuel, a steamboat can pass the Atlantic, with the greatest safety. The discoverer declares that he can carry a steamboat from Providence to New York by using this fuel, for five dollars. It is said that the invention of the cotton gin doubled the value of every acre of land in the southern states, and we are of the opinion that the discovery above mentioned will double the value of the steam engine. It will be especially important to the engines which are employed upon rail roads, and will remove one of the greatest obstacles to the general use of locomotives upon our common roads.

THE BREEDER & MANAGER.

[From the Farmers' Series.]

The Short-horns.—For every portion of the text in this excellent account of the short-horns, we are indebted to the Rev. Henry Berry, than whom there are few more zealous breeders of cattle, while there is no better judge of them.

Whatsoever differences of opinion may prevail respecting the comparative merits of our several breeds of cattle, it must be admitted that the short-horns present themselves to notice under circumstances of peculiar interest. Possessing in an eminent degree a combination of qualities which have generally been considered incompatible, and rendered irresistibly attractive to the eye by their splendid frames, and varied colors, it is not surprising that they have become objects of public curiosity; that they have realized for their breeders enormous sums of money; and that, throughout our own island, and in every foreign country where agriculture is attended to, they are in increasing request.

It might tend to throw much light on the science of breeding, could these animals be traced, in the progress of their improvement, to an earlier period than has hitherto been found possible. Of the extent of that improvement we may, however, form an estimate, by placing together one of the improved, and one of the unimproved race. We should, in such a case, discover resemblance just sufficient to support the belief in a very remote alliance, but there all similarity would cease.

From the earliest periods as to which we have any accounts of our breeds of cattle, the counties of Durham and York have been celebrated for their short-horns, but principally, in the first instance, on account of their reputation as extraordinary milkers.* To recite their feats at the pail would be to invite incredulity; but it may be asserted, on the best evidence, that, taken as a breed, they have never in this particular been equalled. The cattle so distinguished were always, as now, very different from the improved race. They were generally of large size, thin skinned, sleek haired, bad handlers, rather delicate in constitution, coarse in the offal, and strikingly defective in the substance of the girth in the fore quarters. As milkers, they were most excellent, but when put to fatten, as the foregoing description will indicate, were found slow feeders, producing an inferior quality of meat, not marbled or mixed as to

*Before this a large and valuable description of cattle had existed on the western coast of the continent of Europe and extending from Denmark to the confines of France.—They were celebrated for the great quantities of milk which they yielded, and some of them exhibited an extraordinary aptitude to fatten. At what particular time they found their way to England, or by whom they were imported, is unknown; but there is a tradition, that, towards the close of the seventeenth century, a bull and some cows were introduced into Holderness.

In external form, there appeared to be very little to recommend them, for they had large shoulders and coarse necks; the sides were flat, and the head was thick; all the coarse parts were bulky and the prime ones were reduced in size, and they were almost the reverse of what the agriculturist would select: they were, however, bulkier than the native breeds, and they were better milkers than the generality of the cattle of that day. They would, by dint of feeding, grow to an enormous size, but they had not the aptitude to fatten, nor the early maturity, to which they have been since indebted for their triumph over every other breed.—*Edit.*

fat and lean, and in some cases, the latter was found of a particularly dark hue. Such, also, are the unimproved short-horns of the present day, and the distinction cannot be too frequently asserted, because they are, in many cases, considered as specimens of the improved breed, and have actually been resorted to in trials as to the comparative aptitude of animals to fatten—trials which it is evident they could not successfully sustain.

A period of more than eighty years has now elapsed, since the short-horns, on the banks of the river Tees, hence called the Teeswater breed, had assumed a very different character to that contained in the foregoing description. In color they resembled the improved short-horns, being occasionally red, red and white, and roan, though the last named color was not then so prevalent as now. They possessed a fine mellow skin and flesh, good hair, and light offal, particularly wide carcasses, and fore quarters of extraordinary depth and capacity. Perhaps no closer modern resemblance can be found to the above description of the Teeswater breed than Mr. Berry's bull presents. His dam was purchased by Mr. B. on account of the very few crosses that intervened between her and some of the best of the Teeswater cattle, to which he was desirous to go back, on account of the extent to which breeding *in and in* has been carried. When slaughtered, their proof was extraordinary, and many instances are recorded of the wonderful weight of their inside fat.

The remarkable difference which existed between the Teeswater and the old unimproved short-horns may, with propriety, be ascribed to a spirit of improvement which had some time manifested itself among the breeders on the banks of the Tees, whose laudable efforts were well seconded by the very superior land in the vicinity of that river. No reasonable doubts can be entertained that they proceeded on a judicious system of crossing with other breeds, because it was utterly impossible to raise such a stock as the Teeswater from pure short-horn blood. One cross to which they referred was, in all probability, the white wild breed; and if this conjecture be well-founded, it will be apparent whence the short-horns derived a color so prevalent among them.

It is also asserted that, about the period in question, Sir William St. Quintin, of Scampston, imported bulls and cows from Holland, which were crossed with the stock of the country. It would tend to little advantage to proceed with conjectures, as to what other breeds were resorted to, if any: this much is certain, that great improvement was soon manifested, and a valuable variety established, as the two following instances will prove.

Mr. Milbank, of Barmingham, one of the leading improvers, bred and slaughtered an ox, which, at 5 years old, weighed four quarters, one hundred and fifty stones, of fourteen pounds to the stone, producing sixteen stones of tallow; and a cow bred from his stock, slaughtered by Mr. Sharter, of Chilton, at twelve years old, weighed upwards of one hundred and ten stones.

From Mr. Milbank's time, the Teeswater cattle continued to sustain their excellence and celebrity in various hands, until Mr. Charles Colling adopted them, when he manifested a superiority of skill as a breeder, which, in a very brief period, secured him an ample fortune.

Whatever had been the merits of the Teeswater cattle, it is certain Mr. Colling greatly improved them; and though it has been asserted that his success was the result of chance, arising from the possession of an animal, with the merits of which, it is supposed, he was at one period unacquainted, the writer of this article is of opinion that Mr. Colling's success resulted from a deliberate and well considered plan. He found the Teeswater, like all other extravagantly large cattle, frequently of loose make and disproportion. He was sensible, also, of the difficulty of breeding, with any thing like certainty, *large good* animals; and though he has declined on all occasions to throw any light on his views and proceedings, the writer thinks he can detect, in the very outset, and through the progress of his practice, a resolution to reduce the size of this breed, and at the same time, and by that means, to improve its form. This he is supposed to have effected, in the first instance, through the medium of a bull, called "*Hubback*," an animal respecting which there has been much controversy, principally touching the purity of his blood, a question now of little importance, because it is admitted on all hands that Mr. Colling adopted another cross, which prevails in a majority of superior short-horns of the present day. It may, notwithstanding, be matter of interest to state a few particulars respecting this bull.

Without entering on an inquiry by what circumstances Hubback's title to be considered of pure blood is supported or weakened, it may suffice to observe, that it appears probable he possessed on one side the imported blood. The possessor of his dam was a person in indigent circumstances, and grazed his cow in the highways. When afterwards she was removed to good land, near Darlington, she became so fat that she did not again breed; and her son, having the same feeding propensity in a high degree, was useful as a bull during a very short period. The quality of his flesh, hide, and hair, are supposed to have been seldom equalled; and as he was smaller than the Teeswater cattle, he was eminently calculated to forward Mr. Colling's views.

It has been remarked that we have at present no superior horse on the turf, which does not boast the blood of the Godolphin Arabian; so it may be asserted that we have no superior short-horns which do not claim descent nearly, or remotely, from Hubback.*

* This is true, because Hubback was the sire of the dam of Mr. Charles Colling's bull, Foljambe, who was the grandsire of Favorite; and there can be no doubt that there has not been for many years any superior short-horn who was not descended from Favorite. Mr. Charles Colling is said to have considered that the bull, Foljambe, was the one who did his stock the greatest good; and this is not improbable, as Foljambe was the sire both of the sire and dam of Favorite. Hubback, however, must have been a remarkably good animal, and considering the short time during which he was used as a bull, proved himself a first rate stock getter. The following account

After the use of this bull, Mr. Charles Colling proceeded with singular success to produce, from time to time, superior animals; and the number of bulls he disposed of by letting was highly encouraging. But the circumstance which brought the improved short-horns into most extensive notice was the production of the "Durham Ox," an animal which speaks volumes in favor of even a single cross of this blood; for the ox was the produce of a common cow, which had been put to "*Favorite*." At five years old, the Durham ox was sold to Mr. Bulmer, of Harmby, near Bedale, for public exhibition, at the price of £140: this was in February, 1801. He was at that time computed to weigh 168 stones, of 14 lb., his live weight being 216 stones; and this extraordinary weight did not arise from his superior size, but from the excessive ripeness of his points. Mr. Bulmer having obtained a carriage for his conveyance, travelled with him five weeks, and then sold him and the carriage, at Rotherham, to Mr. John Day, on the 14th May, 1801, for £250.

	£
On the 14th of May, Mr. Day could have sold him for	525
On the 13th of June, for	1000
On the 8th of July, for	2000

Mr. Day travelled with him nearly six years, through the principal parts of England and Scotland, till at Oxford, on the 19th February, 1807, the ox dislocated his hip bone, and continued in

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of Hubback we had from Mr. Waistell, of Alihill, who, although his name does not appear conspicuously in the 'Short-horned Herd Book,' deserves much credit for his discrimination here. He used to admire this calf as he rode almost daily by the meadow in which it grazed; and at length he attempted to purchase it from the owner. The price asked, £8, seemed much for a calf not a year old; and the reputation of the short-horns not being yet established, the bargain was not struck. Still he longed for the young beast; and happening to meet Mr. Robert Colling near the place, he asked his opinion of the animal. Mr. Colling acknowledged that there were some good points about him; but there was something in his manner of acknowledging this, which induced Mr. Waistell to suspect that Mr. Colling thought somewhat more highly of the calf than his language expressed, and therefore, he hastened the next morning, concluded the bargain, and paid the money. He had scarcely done so before Mr. R. Colling arrived for the same purpose, and as the two farmers rode home together, they agreed that it should be a joint speculation.

Some months passed by, and either Mr. Waistell's admiration of the calf a little cooled, or his partner did not express himself very warmly about the excellence of the animal, and Messrs. Waistell and R. Colling transferred young Hubback to Mr. C. Colling; who, with the quick eye of an experienced breeder, saw the value of the little beast. Mr. Waistell expressed to us (October, 1823) his regret (natural enough) at having been induced to part with the sire of the short-horns, and his extreme disappointment that when Hubback began to cover, Mr. Charles Colling confined him to his own stock, and would not let him serve even one of Mr. Waistell's cows.—*Edit.*

that state till the 15th April, when he was obliged to be slaughtered, and, notwithstanding he must have lost considerably in weight, during these eight weeks of illness, his carcase weighed,

	Imp.-stones.	lbs.
Four quarters,	165	12
Tallow,	11	2
Hide,	10	2

This was his weight at eleven years old, under all the disadvantages of travelling in a jolting carriage, and eight weeks of painful illness. Had he been kept quietly at Ketton, and fed till seven years old, there is little doubt but he would have weighed more than he did at ten years old, at which age Mr. Day stated his live weight to have been nearly thirty-four hundred weight, or two hundred and seventy stones, from which if fifty be taken for offal, it leaves the weight of the carcase two hundred and twenty stones.

It is a well ascertained fact, that, during his career as a breeder, Mr. Colling tried several experiments in crossing, and the breeds to which he resorted on these occasions, being very considerably smaller than the short-horns, this circumstance tends to corroborate the writer's opinion that he considered it desirable to reduce their size. The cross with the Kyloe led to no results worthy enumeration, but that with the *polled galloway* must not be passed over without comment. Before stating the circumstances attending this experiment, it may be proper to observe that no breed of cattle promised so successful a cross with the short-horns as the galloway. They were calculated, by their deep massive frames and short legs to bring the short-horns nearer the ground, and to dispose their weight in a more compact manner: their hardy habits would be essentially useful, and the quality of their flesh and hair were such as to render the experiment still more safe. Add to this, that they could be obtained of a red color, and we are prepared to admit, even without the sanction of a successful experiment, that they were admirably adapted to cross with the short-horn, standing frequently too high from the ground, not very well ribbed home, and not seldom of loose, disjointed frame.

To this breed Mr. Colling resolved to resort; and though at the time when he did so, the event was regarded with some degree of ridicule by the pure blood advocates, and comments passed which would have deterred ordinary men from the exercise of their judgment, Mr. Colling persisted.

He was much favored by circumstances in promoting his object, which was to take one cross, and then breed back to the short-horn,—the only course, by the way, in which crossing can be successfully adopted. To breed from the produce of a cross *directly among themselves* will lead to the results which have induced many persons, without due consideration, to believe conclusive against crossing; but to take one cross, and then return and adhere to one breed, will, in the course of a few generations, be found to stamp a variety with sufficient certainty.

Mr. Colling's short-horned bull *Bolingbroke* was put to a beautiful red polled Galloway cow, and the produce, being a bull calf, was, in due time, put to *Johanna*, a pure short-horn—she also producing a bull calf. This grandson of Bolingbroke was the sire of the cow *Lady*, by another pure short-horned dam, and from Lady has sprung the highly valuable family of improved short-horns, termed, in reproach, the *alloy*. How far the alloy was derogatory, let *facts* testify.*

It will probably be admitted that the prejudice against this cross was at the highest at the time of Mr. Charles Colling's sale. The blood had then been little, if at all, introduced to other stocks, and it was manifestly the interest, whatever might be the inclination, of the many breeders who had it not, to assume high ground for the pure blood, and to depreciate the alloy. Under these untoward circumstances for the alloy, what said public opinion, unequivocally certified by the stroke of the auctioneer's hammer? *Lady*, before mentioned, at fourteen years old, sold for two hundred and six guineas. *Countess*, her daughter, nine years old, for four hundred guineas. *Laura*, another daughter, four years old, for two hundred and ten guineas. *Major* and *George*, two of her sons, the former three years old, the latter a calf, for two hundred guineas, and one hundred and thirty; besides a number of others, more remotely descended from Lady, which all sold at high prices; in fact, in a sale of forty-eight lots, realizing £7115 17*s.* Lady and her descendants sold for a larger sum than any other family obtained.

The whole particulars of this first grand sale of short-horn stock ought to be preserved. We extract it from Mr. Bailey's Survey of Durham.

A CATALOGUE

Of Mr. C. Colling's Sale of Improved Short-Horned Cattle, October 11th, 1810.

COWS.

Names.	Out of	Got by	Cows' Age.	Bulled by	Sold for Gs.
Cherry,	Old Cherry,	Favorite,	11,	Comet,	83; bought by J. D. Nesham, Esq. Houghton-le-Spring, Durham.
Kate,	Comet,	4, Mayduke,	35;	bought by Mr. Hunt, Morton, Durham.	
Peeress,	Cherry,	Favorite,	5,	Comet,	170; bought by Major Rudd, Marton, Yorkshire.
Countess,	Lady,	Cupid,	9,	Comet,	400; bought by Major Rudd, Marton, Yorkshire.
Celina,	Countess,	Favorite,	5,	Petrarch,	200; bought by Sir H. Ibbetson, Bart., Denton Park, Yorkshire.
Johanna,	Johanna,	Favorite,	4,	Petrarch,	130; bought by H. Witham, Esq. Cliff Hall, Yorkshire.
Lady,	Old Phœnix,	a grandson of Lord Bolingbroke,	14,	Comet,	206; C. Wright, Esq., Cleasby, Yorkshire.
Cathelene,	a daughter of the dam of Phœnix,	Washington,	8,	Comet,	150; bought by G. Parker, Esq. near Malton, Yorkshire.
Laura,	Lady,	Favorite,	4,	Comet,	210; bought by Mr. Grant, Wyham.
Lily,	Daisy,	Comet,	3,	Mayduke,	410; bought by Major Rudd, Lincolnshire.
Daisy,	Old Daisy,	a grandson of Favorite,	6,	Comet,	140; bought by Major Bower, Welham, Yorkshire.
Cora,	Countess,	Favorite,	4,	Petrarch,	70; bought by G. Johnson, Esq. near Scarborough.
Beauty,	Miss Washington,	Marsh,	4,	Comet,	120; bought by C. Wright, Esq.
Red Rose,	Eliza,	Comet,	4,	Mayduke,	45; bought by W. C. Fenton, Esq., near Doncaster.
Flora,	———,	Comet,	3,	Mayduke,	70; bought by Earl of Lonsdale.
Miss Peggy,	———	a son of Favorite,	3,	Comet,	60; bought by O. Gascoigne, Esq., Parington, Yorkshire.
Magdalene,	a heifer	by Washington,	Comet,	3,	Comet, 170; bought by —— Champion, Esq. Blyth, Notts.—2669 Guineas.

BULLS.

Names.	Age.	Out of	Got by	Price. Gs.	Bought by
Comet,	6,	Phœnix,	Favorite,	1000;	bought by Messrs. Wetherill, Trotter, Wright, and Charge, near Darlington.
Yarborough,	9,	Favorite,	55;	bought by A. Gregson, Esq., Lowlinn, Northumberland.	
Major,	3,	Lady,	Comet,	200;	bought by Mr. Grant, Wyham.
Mayduke,	3,	Cherry,	Comet,	145;	bought by—— Smithson, Esq.
Petrarch,	2,	Old Venus,	Comet,	365;	bought by Major Rudd.
Northumberland,	2,	——,	Favorite,	80;	bought by Mr. Buston, Coatham, Durham.
Alfred,	1,	Venus,	Comet,	110;	bought by Mr. Robinson, Acklam, Yorkshire.
Duke,	1,	Duchess,	Comet,	105;	bought by A. Compton, Esq. Carham, Northumberland.
Alexander,	1,	Cora,	Comet,	63;	bought by Mr. Fenton.
Ossian,	1,	Magdalene,	Favorite,	76;	bought by Earl of Lonsdale.
Harold,	1,	Red Rose,	Windsor,	50;	bought by Sir C. Loraine, Northumberland.—2249 Guineas.

BULL CALVES, UNDER ONE YEAR OLD.

Names.	Out of	Got by	Price. Gs.	Bought by
Ketton,	Cherry,	Comet,	50;	bought by Major Bower.
Young Favorite,	Countess,	Comet,	140;	bought by —— Skipworth, Esq. Lincolnshire.
Geerse,	Lady,	Comet,	130;	bought by ——Walker, Esq. Rotherham.
Sir Dimple,	Daisy,	Comet,	90;	bought by T. Lax, Esq. Ravensworth.
Narcissus,	Flora,	Comet,	15;	bought by Mr. Wright.
Albion,	Beauty,	Comet,	60;	bought by T. Booth, Esq. Catterick.
Cecil,	Peeress,	Comet,	170;	bought by H. Strickland, Esq. Boynton, Yorkshire.—655 Guineas.

HEIFERS.

Names.	Age.	Out of	Got by	Price. Gs.
Phœbe,	3,	Dam by Favorite,	Comet,	105; bought by Sir H. Ibbetson.
Young Duchess,	2,	dam by Favorite,	Comet,	183; bought by T. Bates, Esq. Halton Castle, Northumberland.

*The dam of Lady was also the dam of the bull Favorite; and as the grandson of Bolingbroke is not known to have been the sire of any other remarkably good animal, it is most probable that the unquestionable merit of Lady and her descendants is to be attributed more to her dam than to her sire.—*Edit.*

Young Laura, 3, Laura, Comet, 101; bought by Earl of Lonsdale.

Young Countess, 2, Countess, Comet, 206; bought by Sir H. Ibbetson.

Lucy, 2, Dam by Washington, Comet, 132; bought by Mr. Wright.

Charlotte, 1, Cathelene, Comet, 126; bought by Mr. R. Colling.

Johanna, 1, Johanna, Comet, 35; bought G. Johnson, Esq.—808 Guineas.

HEIFER CALVES, UNDER ONE YEAR OLD.

Names.	Out of	Got by	Price. Gs.	Bought by
Lucilla,	Laura,	Comet,	106;	bought by Mr. Grant.
Calista,	Cora,	Comet,	50;	bought by Sir H. V. Tempest, Bart, Winyard, Durham.
White Rose,	Lily,	Yarbro',	75;	bought by Mr. Strickland.
Ruby,	Red Rose,	Yarboro,	50;	bought by Major Bower.
Cowslip,	——	Comet,	25;	bought by Earl of Lonsdale.—306 Guineas.

[From the London Lancet.]

Lectures on Veterinary Medicine,

Delivered in the University of London, by Mr. Youatt.

LECTURE III.—(CONTINUED.)

The Turbinated Bones.—Below the æthmoid are the two turbinated bones. *The superior turbinated bone* in the *horse* seems to be almost a continuanee of the æthmoid. It is oblong and convoluted, and thence its name, turbinated or turban-shaped. The French call these bones *cornets*, from their convolutions. It presents a labyrinth of cavities, divided into cells by curious thin septa, and all of them communicating with each other; and the parietes being thin, porous, elastic, in the living animal, and exceedingly brittle in the dead one.

It is so placed as to form a division between the nasal cavity and the maxillary sinuses. It is that which renders them separate cavities, and there is a communication between, as I have stated, under the valve-like structure of the prolongation of the lower cell of the æthmoid bone.

In *oxen* the superior turbinated bone is small and simple, and is almost destitute of convolutions. It is evidently merely supplementary to the æthmoid, and its functions is diminished and rendered unnecessary by the development of that bone. This is more particularly so in the *dog*, where the turbinated bones are reduced to utter insignificance by the bulk of the æthmoid.

The *inferior Turbinated Bone* in the *Horse* is more porous than the superior one; it is also more convoluted, and the convolutions are not a little complicated. The gause-like structure of this bone is worthy of notice, and also the different manner in which the two cornets are convoluted; the upper portion of the superior bone being most closely attached to the walls of the cavity, and the lower border lying comparatively loose;—the reverse taking place with the lower turbinator. The inferior turbinator lies along the superior maxillary, below its union with tbe nasal. Neither of them can be separated from the bony parietes of the cavity by maceration, but they are too readily broken off in our dry preparations. A prolongation of the lower turbinator extends over the inner ala of the false nostril, and may be readily seen by lifting the nostril. It has, sometimes, been mistaken for morbid tumour, or minute polypus. The hollow pedicle which runs down thus far has no outlet, but seems designed to give support to the inner ala of the false nostril. Comparative anatomists speak of the connexion between the two turbinated bones, but I have never been able satisfactorily to trace it.

In the *Ruminants*, the inferior turbinated bone is more developed, and particularly in the *sheep*, so as to fill up, as it were, the whole of the cavity, accounting for the readiness with which that animal is *blown* when he is a little hurried. In the *dog* this bone is very small, but is curiously complicated. We need in him both speed and scent; this bone is also unsually convoluted, and the nasal cavity is left more open.

The Meatus—You will perceive that these bones form the cavity into three distinct meatuses or channels; the superior one lies between the superior turbinated one and the nasal bone, constituting the roof of the cavity, and it even extends above, and by the side of the æthmoid bone, to the cribriform plate, and it is closed at its superior termination. It is defended from the access of the external air, or at least from any violent current of air, by the development of the false nostril at its lower part. It is an interposed space to defend the æthmoid bones from injury if the nasals should be fractured; and the air, loitering as it were in it, and being longer in contact with the sensitive membrane by which it is lined, contributes to the acuter sense of smell. It is the portion of the cavity more particularly devoted to the sense of smell. You will not forget the use you may make of it in fracture of the nasals; an elevator may be introduced below, or the trephine may be applied through its whole extent.

The central meatus lies between the two turbinated bones. It receives every natural or morbid discharge from the maxillary and other sinuses, for there is a valve-like opening into these sinuses, two-thirds of the way up the meatus, and under the superior turbinated bone. There is only one spot, pointed out to you by these preparations, at which the trephine could possibly be applied.

The largest channel is along the floor of the nasal cavity, under the inferior turbinator, and extending from the anterior to the posterior termination of the cavity. It is the proper air passage; and because it has this important function it is out of the reach of any injury or violence, and is not clogged by any discharges but those that proceed from the respiratory tubes beyond the nostril, or an exceedingly unfrequent regurgitation of matter from the stomach. The distinct offices of these channels, and their different construction, admirably adapted for the performance of each, deserve your attention.

The Maxillary and other Sinuses.—When the superior turbinated bone is removed, the maxillary sinus, of which I shall have to speak under another system, is exposed, or rather becomes a portion of the nasal cavity. With the maxillary sinuses, the frontal, the superior æthmoidal, and the sphenoidal in the horse, and in the ox, the palatine cells communicate. Altogether they form a vast hollow, and, under some diseases, and particularly under glanders, contain a great quantity of purulent or other fluid. The maxillary sinus freely communicates with the others, and it opens into the nasal cavity under the superior turbinated bone.

The Lachrymal Duct.—This is the channel through which the superfluous tears are conveyed to the lower part of the nostril, and is exposed to view when the superior turbinated bone is removed. There is, behind the tubercle on the lachrymal bone, varying in size in our different patients, and which will be more particularly described when we treat of the age, a funnel-shaped depression, into which the superfluous fluid of the eye is received through the puncta on either side of the caruncle. I will not detain you by entering into the dispute whether the membrane by which this funnel is lined is a proper sac, but it is at least an enlargement of, or the most capacious part of the lachrymal duct, and to a person possessed of common eyesight it is plainly enough a sac.

A long canal here commences, and runs down the lachrymal, and along the maxillary bone, very small, and with difficulty admitting any probe. Passing over the maxillary it takes a direction a little superiorly, so that it must not only be a small but a flexible probe to pass through it. About an inch and a half down the maxillary, and not more than half an inch from the foramen infra orbitarium posteriorly, and a little superiorly, it enlarges, and becomes membranous, and is continued downward until it terminates on the inner and inferior part of the nostril, below the proper lining of the nostril and on the cuticle. It terminates on the cuticle, that the highly sensitive membrane of the nose may not be excoriated by the tears, occasionally rendered acrimonious, in inflammation of the eye. The oval termination of this duct is easily brought into view by lifting the nostril.

We shall have, by-and-by, to speak of a disease, which is characterised, in its later stages at least, by ulceration of the Schneiderian membrane, and ulcers of a chancrous nature assuming a definite rounding or oval form. Take care that you do not mistake this for one of them, or pronounce a healthy horse to be glandered, because, for the first time, you happen to observe the termination of this duct. It is a mistake that has been made by many a good horseman, and even by some veterinary surgeons. A little while ago I was sent for in great haste by the coachman of one of our four-in-hand gentlemen. I found him in sad tribulation; one of his master's best horses was glandered, and the disease would run through the whole team. It was the first time that this aperture had attracted the attention of a man who would not have yielded to any one in pretension to horse knowledge. I know one of *your* brethren who would otherwise have passed a very good examination, but he happened, unfortunately, to say that the nasal duct opened on the Schneiderian membrane, and he was turned back on this point of practice.

NOT AT HOME.—Some strangers being on a visit to Gloucester, Mass. recently called at the house of Mr. Penn, a gentleman at the age of one hundred and two, to pay their respects. He was not at home, but at work in his corn field, a mile distant from the house.

THE GARDENER.

[From the Gardener's Magazine.]

The Results of an instance of growing the Cucumber and the Melon in [Heath Mould or] Bog Earth. By Mr.* James Figgans.

Sir,—I put up my frames in February with dung in the usual way; and it occurred to me to try a two-light frame with bog earth [heath mould,] which I had never seen done, anticipating, however, but little the result. When the bed was made up, I put nine inches of bog earth, as taken from the field, into it, and when the heat had arisen, I drew the earth into two heaps, one under each light, to receive the plants, and then introduced a little more earth into the frame. I put plants of cucumber under one light, and of melon under the other. The plants, both of cucumber and melon, ran very fast, and were very strong, and both produced a very fine crop; but I did not pay any particular attention to the number of fruit. As I possessed one seed of cucumber, which I had received as a very fine kind, and which I was, in consequence, anxious to propagate, I introduced it into the side of the heap upon which were the other cucumber plants, to which I applied my knife freely when the plant from the one seed began to run. At the same time I planted in the heap under the other light, one seed of the King William melon; and when the plants from these two seeds began to meet, I used the knife to the plant of the melon until I had left but one vine, upon which I had one melon of 9 lbs. weight. Of the produce of the cucumber seed I annex you a list:—

Number.	Length.	Circumference.
1.	14 in.	11 in.
2.	21	10½
3.	19	10¼
4.	18	10
5.	18	10¼
6.	18	10
7.	18½	10¼
8.	19½	9¼
9.	18	9
10.	18	9
11.	17	17
12.	17	8
13.	16	8½
14.	15	8½
15.	14	8
16.	13	8
17.	14	8½
18.	13	7½
19.	10	7
20	8	7

The frame was only once lined with fresh dung, and that previously to these two seeds being put in. I found that the bog earth required more water by about one third. I propose continuing the use of the bog earth this season, and, if agreeable to you, will communicate the result. I ought to mention that the fruit was of a good quality. I am, Sir, yours, &c.

James Figgans.

*In another number, I have endeavored to show that the term bog earth would naturally imply that dense, sodden, coagulate, moorish soil which bogs, morasses, and swamps usually supply; and that the dry, mixedly sandy, easily separable mould met with on heaths, and in which the species of heath (*Erica*) delight to grow, would be far more appropriately denominated if termed heath mould.—*J. D.*

Observations on the Growth of Plants during different times of the day. By E. M. Meyer, Director of the Botanic Garden at Konigsberg, in Prussia.

To ascertain in what degree the different times of the day promote the growth of plants, M. Meyer, occasioned a scape of Amaryllis *Belladonna*, well known to grow very rapidly, to be measured thrice a day,—at six o'clock in the morning, twelve at noon, and six in the evening. The thermometer was also observed, and the results are exhibited together in a table. This table shows that the plant grew in the day almost twice as much as during the night, which M. Meyer ascribes to the influence of the light and warmth. He observes that the increase of the plant was proportional to the height of the temperature; but in what degree the light contributed to the growth could not be well ascertained. The entire deprivation of light would have lowered the temperature, and also injured the health of the plant, in which case the result of the observation could not be depended upon.

MISCELLANEOUS.

Communicated for the Farmer and Gardener.

SOAP—Potash, soda and amonia, are called alcalies; the two first fixed and the last a volatile alcali. Soda is obtained from the ashes of plants growing in or near the sea, and is hence called the marine alcali.

Amonia is the result of animal fermentation, and is consequently forming in great quanities under a great variety of circumstances, from many of which the most valuable manures are formed, but which unfortunately are lost as fast as formed from its volatile character and the ignorance of its nature and the modes of retaining and applying it.

Either of the alcalies, when combined with oil and water, form soap. Potash is the alcali used in soft soap, and soda forms hard soap. Soap formed by amonia is sometimes called volatile lineament.

The process of forming soap of any kind is founded on the fact, that an alcali has an attraction, both for water and oil, and hence unites these two opposing substances with itself and with each other.

If the alcali, oil and water are in a pure state, they always form a chemical union when brought in contact, and result in this useful article in domestic economy and personal cleanliness.

The cause of failures in soap making, is always some acid, salt or other foreign ingredient, mixed with one or more of the three substances requisite for the work. Carbonic acid, sometimes called fixed air, is perhaps the most common cause of failure in this useful domestic art. As the carbonic acid gas, exists at all times and in all places in the atmosphere, it readily, and almost necessarily combines with the potash contained in ashes, as they are produced by the process of combustion. Hence, the potash obtained from the leaching of ashes, is not a pure alcali, but a salt called by chemists, the carbonate of potash.

If newly burnt lime be mixed with the ashes while leaching, the carbonic acid leaves the potash and combines with the lime, making the carbonate of lime, and leaving the potash more nearly a pure alcali, and of course possessing a stonger attraction, both for water and oil. Hence the use of putting a little quick lime into leaching tubs with the ashes, or rather beneath the ashes.

The cause of failures in soap boiling is sometimes in the oil or grease; generally perhaps the salt mixed with it during the process of cooping or preserving. This may be removed by water; as salt is soluble in water, which does not combine with the oil by the simple process of boiling. Hence if the soap grease be largely charged with fresh water once boiled, before it is mixed with the other two ingredients for forming soap, it will be freed from its salt, and possibly a failure of success by that means prevented.

Although salt when combined with grease, frequently prevents the success of the soap boiler, in many manufactories it is used in large quantities in the making of soap. The two cases, however, are entirely distinct, and have no connexion with each other. When salt is used by soap boilers, it is for changing soft soap into hard soap; in other words to give soda the place of the potash in the soap already formed.

Salt is the muriate of soda, or muriatic acid and soda. The muriatic acid has a stronger attraction for potash, than for soda; consequently, when the salt is put into the soap containing potash, forming the muriate of potash in a liquid state, called waste ley; the salt and the soap hence change their partners, the one taking the potash, the other the soda; in other words, the muriatic acid takes the potash from the soap, and gives in exchange the soda, which forms soft soap into hard soap.

A Negro's Answer.—A planter in St. Domingo was one day disposing of a horse to a neighbor, and being questioned by the purchaser regarding its qualities, among the rest whether it kicked, the disposer replied it was the quietest animal imaginable. He had, however, hardly used the expression when it flung up its heels, to the danger of the bystanders.—The purchaser, being irritated at the duplicity of the other, reproached him with his intended deception, when, to substantiate the peaceful character of the animal, he called one of his slaves, and demanded of him if he ever saw this horse kick before? "O, no, massa, smartly answered the negro, me never saw him kick before—always saw him kick behind."

Large Ox.—On the last day of May, there was exposed to sale at Quebec, one of the finest oxen ever seen in Canada. The nett weight of the carcase, opened and stripped of the hide, was 1544 lbs.; the tallow weighing 198 lbs., and the hide 163 lbs.: gross weight when alive, 2324 lbs. This fine animal was seven years old, and was raised by K. Chandlier, Esq. of Nicolet near Quebec.

CONTENTS OF THIS NUMBER.

Wanted; first numbers of Farmer & Gardener—Pennsylvania Horticultural Society—Rape Seed Oil—Pointers—Report of Maryland Horticultural Society—Poison in custards—German Emigrants—Steam Navigation with Suez—Eggs—Spontaneous combustion—Agricultural Chemistry—Gama Grass; letter from Alabama—Important to Agriculturists; Turnip Fly—Nantucket Sheep Shearing—New Invention—Short Horns; Rev. Henry Berry's account of—Cucumbers and Melons, grown in bog earth—Growth of Plants at different times of the day—Soap—A Negro's answer—Large Ox—Prices Current.

BALTIMORE PRODUCE MARKET.

☞ *These Prices are carefully corrected every* MONDAY.

	PER.	PROM	TO
BRANDY, Apple,	gallon.	$0 27	$—
Peach,	"	75	—
BEANS, white field,	bushel.	2 00	—
BEEF, on the hoof,	100lbs.	5 00	5 50
CORN, yellow,	bushel.	—	63
White,	"	65	66
COTTON, Virginia,	pound.	10	13
North Carolina,	"	11	13
Upland,	"	14	15
FEATHERS,	pound.	—	37
FLAXSEED,	bushel.	1 00	1 25
FLOUR—Best white wheat family,	barrel.	6 50	7 00
Do. do. baker's	"	6 00	6 50
Do. do. Superfine,	"	5 25	5 37
Super Howard street,	"	5 12	5 —
" " wagon price,	"	5 00	—75
City Mills, extra,	"	5 50	5 37
Do.	"	5 25	5 37
Susquehanna,	"	5 25	—
Rye,	"	3 37	—
GRASS SEEDS, red Clover,	bushel.	4 50	—
Timothy (herds of the north)	"	3 00	—
Orchard,	"	3 00	—
Tall meadow Oat,	"	2 50	—
Herds, or red top,	"	1 25	—
HAY, in bulk,	ton.	—	13 00
Pressed,	100 lbs	—	90
HEMP, country, dew rotted	pound.	6	7
" water rotted,	"	7	8
LIME,	bushel.	30	35
MUSTARD SEED, Foreign,	"	4 50	5 00
Domestic,	"	5 00	—
OATS,	"	30	32
OIL, linseed,	gallon.	—	90
Castor	"	1 70	1 80
PEAS, red eye,	bushel.	—	—
Black eye,	"	— —	1 00
Lady,	"	— —	—
PLASTER PARIS, in the stone,	ton.	3 00	—
Ground,	barrel.	1 37	—
PALMA CHRISTA BEAN,	bushel.	2 00	—
RAGS,	pound.	3	4
RYE,	bushel.	62	— —
TOBACCO, crop, common,	100 lbs	3 50	5 00
" brown and red,	"	4 50	6 00
" fine red,	"	6 00	8 00
" wrappery, suitable for segars,	"	6 00	12 00
" yellow and red,	"	8 00	12 00
" yellow,	"	13 00	17 00
" fine yellow,	"	15 00	22 00
Seconds, as in quality,	"	4 00	5 00
" ground leaf,	"	5 00	9 00
Virginia,	"	4 00	—
Rappahannock,	"	3 00	4 00
Kentucky,	"	4 00	8 00
WHEAT, white,	bushel.	1 06	1 12
Red,	"	95	1 05
WHISKEY, 1st pf. in bbls	gallon.	28	29
" in hhds	"	26	—
" wagon price,	"	—	—
WAGON FREIGHTS, to Pittsburgh,	100 lbs	1 75	—
To Wheeling,	"	1 50	—
		washed.	*unwash*
WOOL, Prime & Saxon Fleeces,	pound.	50 *to* 60	24 *to* 26
Full Merino,	"	40 50	20 24
Three fourths Merino,	"	33 40	22 24
One half do.	"	28 33	21 22
Common & one fourth Meri.	"	25 28	18 20
Pulled,	"	28 31	18 20

WOOL.

LYMAN REED & CO. Commission Merchants, No. 6 S. Charles street, Baltimore, Md.—devote particular attention to the sale of WOOL. All consignments made them will receive their particular attention, and liberal advances will be made when required. May 9.

SUBSCRIBERS can have their volumes of the AMERICAN FARMER neatly half bound and lettered at this establishment, at 75 cents a volume. Most of the Nos. can also be had at 10 cents each, to complete files.

BALTIMORE PROVISION MARKET.

	PER.	FROM.	TO.
APPLES,	bushel.	$0 50	$—
BACON, hams,	pound.	11	—
Shoulders,	"	—	9
Middlings,	"	—	10
BUTTER, printed, in lbs. & half lbs.	"	31	—
Roll,	"	12	20
CIDER,	barrel.	—	—
CALVES, three to six weeks old	each.	4 00	7 00
Cows, new milch,	"	15 00	27 00
Dry,	"	9 00	12 00
CORN MEAL, for family use,	100lbs.	1 62	1 75
CHOP RYE,	"	1 40	1 56
EGGS,	dozen.	9	—
FISH, Shad, trimmed		—	—
" salted,	barrel.	6 37	—
Herrings, salted, No. 1 & 2,	"	3 87	4 00
Mackerel, No. 1, 2 & 3,	"	4 12	7 00
Cod, salted,	cwt.	—	2 75
LAMBS, alive,	each.	1 25	2 00
Slaughtered,	quart'r	31	50
LARD,	pound.	8	—
ONIONS,	bushel.	—	73
POULTRY, Fowls,	dozen.	—	—
Chickens,	"	2 50	2 75
Ducks,	"	—	2 50
POTATOES, Irish,	bushel.	—	62
New,	peck.	—	—
VEAL, fore quarters,	pound.	7	—
Hind do.	"	8	—

ADVERTISEMENTS.

SEED WHEAT, RYE, &c.

THE subscriber offers his services for the procurement of Seed Wheat, Rye, &c. for those who shall provide funds in Baltimore for that purpose. He does not keep those articles on hand, and therefore can send them to those only who furnish him with the *means in advance*. For all such, however, he will use his best judgment to procure such grain as shall be ordered, charging a small commission for his agency. I. I. HITCHCOCK,
Amer. Farm. Estab.

Note—I. I. H. has made arrangements for procuring for cash, Seed Grain of the very first quality, from some of the best farms in Maryland. aug. 12

A JACKASS.

FOR SALE—A fine Jack, recently imported from Buenos Ayres, by an officer of the Navy, to whom he was presented under circumstances which render it certain that he was there considered a very valuable animal of the best blood and qualities of that country, which is famous for its fine mules. He is of middling size, between 12 and 13 hands high, only five years old, and as handsome *as any other Jackass*. The present owner having no use for him, will be glad to put him where he will be beneficial to the Agricultural interest of the country, and with that view offers to sell him for $500. Application (post paid) must be made to
I. I. HITCHCOCK,
aug. 12 Amer. Far. Estab.

A MARE IN EXCHANGE FOR CATTLE.

A GENTLEMAN of Virginia is desirous of exchanging a valuable blooded brood Mare for thorough bred Durham short horn Cattle—for sheep of the best blood, or for a good Jackass. Should any gentleman be disposed to make such a barter, he shall receive further information on application to I. I. HITCHCOCK,
aug. 12 Amer. Farm. Estab.

A SUPERIOR JACK FOR SALE.

FOR SALE, by a farmer in this state, a splendid Maltese Jack, *first rate in every respect*. He is *nearly* 14½ hands high!—Eight years old last spring; quick in performance, and *efficient* to an unusal degree, 31 mares out of 34 in one instance, and in another 8 out of 9 mares belonging to one farmer proving with foal by him in 1833. He is probably in every respect one of the best Jacks ever imported into the United States. Price $1000. Address
I. I. HITCHCOCK,
jy 29 Amer. Farmer Establishment.

TURNIP SPINACH & CABBAGE SEED.

A FULL supply of these seeds of several of the best varieties for summer and fall sowing, now on hand and for sale by I. I. HITCHCOCK,
july 1 Amer. Farm. Estab.

DALE'S NEW HYBRID TURNIP.

THE subscriber now offers to the agriculturists a new and decidedly superior variety of Turnip, originated by R. Dale, esq. an intelligent farmer, near Edinburgh, Scotland; it was obtained by unwearied attention in crossing the Swedish or Ruta Baga Turnip; it is superior in size and flavor to the Ruta Baga; is closer and finer in the texture; it is rapid in its growth as the White Flat Turnip. In fact, it includes the great desideratum in the selection of a proper variety of the Turnip which is to obtain the greatest possible weight at a given expense of manure. This variety seems to be more adapted to this end than any other sort introduced; it will be found superior in quality to any of the White Field Turnips, and keeps longer than any of them, and very near as long as the Ruta Baga—the color is yellow—the shape oblong. Price 25 cents per ounce. The season for sowing is at hand. I. I. HITCHCOCK
10 June Amer. Farm. Estab.

IMPROVED DURHAM SHORT HORN BULLS—CHEAP.

I AM requested by a gentleman of high character as an agriculturist, in a neighboring state, to offer for sale several Bulls of his, of which he has yet given me no other description than the following, viz: "My stock is of the Short Horn Durham breed, and derived from the best and purest sources, imported recently." He offers Bulls two years old, one year old, and of the last spring, at the following prices respectively: $200, $150, $100.—If, as I presume from the character of the gentleman, his stock is of a high order, and if he can, as I also presume, furnish pedigrees of pure blood, then is the present a rare opportunity to procure fine Bulls, at more moderate prices than I have hitherto been able to offer them. I will ascertain further particulars in regard to this stock, and be able shortly to speak definitely as to its character. In the mean time, should any gentleman want one or more of these Bulls, he may rely entirely on receiving through this Establishment no other than such as shall be represented and proved too.
Address I. I. HITCHCOCK,
July 15. American Farmer Establishment.

THE COMPLETE FARMER.

JUST PUBLISHED and for sale at this establishment, price $1, "The Complete Farmer and Rural Economist, containing a Compendious epitome of the most important branches of Agriculture, and Rural Economy. By Thomas G Fessenden, Editor of the New England Farmer." "Agriculture is the art of arts: without it man must be a savage, and the world a wilderness."
june 24

TERMS OF THIS PAPER.

1. Price five dollars per annum, payable in advance. ☞When this is done, 50 cents worth of any kind of seeds on hand will be delivered or sent to the order of the subscriber with his receipt.

2. The *manner* of payment which is preferable to any other for distant subscribers, is by check or draft on some responsible party here, or else by remittance of a current bank note; and to obviate all objection to mail transmission, *the conductor assumes the risk.*

3. Subscriptions are always charged BY THE YEAR, and never for a shorter term. When once sent to a subscriber the paper will not be discontinued (except at the discretion of the publisher) without a special order, on receipt of which, a discontinuance will be entered, to take effect AT THE END of the current year of subscription.

4. Subscribers may receive the work either by mail in weekly numbers, or in monthly or quarterly portions; or else in a volume (ending in May annually), handsomely pressed, half bound and lettered (to match with the American Farmer) by such conveyance as they may direct: but the $5 must in all these cases be paid in advance.

☞ADVERTISEMENTS relating to any of the subjects of this paper will be inserted once at one dollar per square, or at that rate for more than a square, and at half that rate for each repetition.

THE FARMER & GARDENER;

AND LIVE-STOCK BREEDER & MANAGER.

CONDUCTED BY I. IRVINE HITCHCOCK, AND ISSUED EVERY TUESDAY FROM THE AMERICAN FARMER ESTABLISHMENT, AT $5 PER ANNUM, IN ADVANCE.

No. 17. **BALTIMORE, AUGUST 26, 1834.** **Vol. I.**

☞This publication is the *successor* of the late
AMERICAN FARMER,
(which is discontinued,) and is published at the same office, at five dollars per year, payable in advance.
☞When this is done, 50 cents worth of any kind of seeds on hand will be delivered or sent to the order of the subscriber with his receipt.

American Farmer Establishment.

BALTIMORE: TUESDAY, AUGUST 26, 1834.

TO OUR PATRONS.—We return our sincere thanks to those, who, considering that we are just commencing a publication, which they are pleased to call a useful one, have promptly remitted the first year's subscription:—it enabled us to progress for some time swimmingly. But there are some who have not yet assisted us in our enterprise. To them we would just say (in a whisper) that we are obliged by our contracts to pay Cash *every week*, for every cent that this publication costs, from the paper to the mailing; and we hardly need add, that we find it *up-hill* work, in this dry weather. Nothing can enable us to keep our engagements but PROMPTNESS on the part of our patrons. We earnestly ask then, that such as are delinquent, will feel for us, *in the right place*, and try the safety of the mail at our risk.

GAMA GRASS SEED WANTED.

The conductor of this paper is constantly called on for Gama Grass Seed. He obtained a little last spring from some of his southern subscribers, and now begs leave respectfully to repeat his request that they will have saved for him this summer such parcels as it may be convenient to secure, and forward it by any conveyance the first opportunity. He will cheerfully pay any reasonable expense both for the gathering and the transmission, his chief object being the accommodation of those farmers who are willing to give it a trial.

He is also anxious to obtain the seed of the Guinea Grass in such quantities as may be convenient to send.

MANUFACTURE OF SILK.

We give an extract below from the Western Weekly Review, of the proceedings of the County Court in Franklin, Ten. which are worthy of imitation in every county in the United States.

The raising of silk is an employment particularly adapted to the inmates of our county poor houses; especially if the Morus Multicaulis be cultivated for the purpose, as it will remain a shrub, and the leaves will be easily accessable to the aged and infirm, or to the orphan children which are commonly found in these receptacles of poor orphans. It is a subject we have intended to recommend to the attention of the public, and are now very happy in having such a weighty example to lay before our readers. Whether the anticipations of the most sanguine may be realized in this measure, we do not and cannot pretend to say; but we have no fears that all reasonable expectations as to its profits, will be fully realized.

There are thousands of orphans in our cities, and elsewhere, who are neglected, and suffered to run uncontroled and uneducated; totally without the aid of the salutary restraint of christian discipline, and who grow up fit subjects for the commission of crime, and to be the future inmates of penitentiaries—others are bound out to trades, many of whom are little better provided for than those who have had no fostering care extended to them; all of whom might be saved by such a measure being adopted.

It is to be hoped the Franklin County Institution (a fit name for extended benevolence) may find their efforts so satisfactory as to induce them to extend their plan for the benefit of orphan children, and engraft upon their system a plan of education whereby the destitute orphan may by his own labor procure a liberal education or a mechanical trade without being brutalized, or without expense to the public. This is certainly a practical object, and we advise the FRANKLIN inhabitants to take it into consideration. We would recommend to their notice the newly invented Reel of Gay & Bottom, of Connecticut, as the reeling will form a suitable business for the infirm.

DOMESTIC MANUFACTURES—SILK.—On motion of Esquire McDaniel, sustained by a short and sensible speech, our county court, in the beginning of the present week, passed an order to enclose an acre of ground adjoining the poor house, and have it planted with mulberry trees, for the purpose of giving some easy and suitable employment to the paupers, and at the same time rendering their maintenance less burdensome to the county than it is at present. Although it is questionable with us, whether the raising of the silk worm, and the manufacture of the material, can be made to realize the expectations which many entertain, owing to the continued sickness and decrepitude of the inmates of the institution; yet we are gratified to find our court and our citizens, willing to try an experiment, which, even should it prove of no immediate advantage, promises at some future day to be of immense benefit and interest. Within a very few years, silk is destined to form a conspicuous and profitable branch of manufactures of our country, and every attempt to increase its culture, and draw public attention to the matter, is a step forward to the consummation of that period.

[From the Sierre Leone Gazette.]

AFRICAN VEGETATION.—A curious instance of rapid vegetation may be seen on the premises of Messrs. Z. Macaula & Babington, in Water-street. Some vine cuttings were planted there on Monday, the 6th inst.—about the fourth day afterwards they began to sprout; and on Wednesday, the 22d, (sixteen days after they were planted) two bunches of grapes were observed on one of the sprouts, and one bunch on another. There are this day (Saturday, 25th) seven bunches to be seen; and the sprouts on which they have been produced, have grown to the length of six inches, in the time.

MARYLAND HORTICULTURAL SOCIETY,

August 23, 1834.

Mr. Caleb Whittemore presented 6 fine green flesh Cantaloupes.

Mr. Henry Thompson presented 2 very fine green flesh Cantaloupes.

Mr. Caleb Whittemore presented one peck of Onions, raised from seed this season, very fine.

Mr. Samuel Feast exhibited Euphorbia Striata; Verbena Corymbosa; Phlox Suaviolens; Centaurea Americana; Gonolobus Macrocarpus; Verbena aubletia; Erithrina Cristagalli; Jasminum Sambac plena or Duke of Tuscany Jasmine; several roses, &c.

On Tuesday last a CALF was killed at the slaughter house of Mr. Anthony Doebler, in Mifflinburgh, which weighed '333' pounds. The hide weighed '65' pounds. This extraordinary calf was raised by Mr Solomon Betz, of East Buffaloe township, in the county; and was but 4½ months old at the time of slaughter. It is the opinion of those good judges who examined him, that he was the largest and most extraordinary calf ever killed in Pennsylvania: and the Union Cattle show is bantered to produce such an one at their annual celebration next fall.

THE FARMER.

Agricultural Chemistry.

Oxygen.—We have no knowledge of the properties of oxygen in a state of complete separation. In the most simple form under which we can procure it, it is combined with caloric, and probably with light and electricity, constituting oxygen gas.

This gas has neither smell or taste. Its specific gravity is 1.1111. One hundred cubic inches weigh 88.88 gr. It is a little heavier than atmospheric air.

This gas was first discovered by Dr. Priestly, in 1774; and obtained from the red oxyd of mercury, exposed to a burning lens. Scheele and Lavosier obtained it soon afterwards; and by this discovery a complete revolution in chemical philosophy has been effected. It has been found to be a constituent principle in almost every substance in nature, whether animal, vegetable or mineral.

Its agency is so extensive, and so important in vegetation, that he who is ignorant of its most leading principles in the vegetable economy, is undeserving of the name of an agriculturist; neither is he capable of directing many of the most important operations of a farm, with economy and success.

This gas may be obtained from nitrate of potash (saltpetre) exposed to a red heat in a coated glass or earthen retort, or in a gun barrel. From one pound of this salt, 1200 cubic inches of this gas may be obtained. It may also be obtained from red lead, red precipitate of mercury, or more purely from chlorate of potash.

The atmospheric air contains of oxygen,	21.	parts in	100
Water,	88.88	"	100
Sugar from cane,	53.	"	100
Sugar from grapes,	56.	"	100
Starch from wheat,	49.5	"	100
Gum,	50.84	"	100

In wood, of 100 parts of the ligneous fibre of

Beechwood,	42.73	are oxygen,
Oak,	41.78	"

This examination of substances might be extended to every vegetable substance; and it would be seen that oxygen gas, being converted into a solid form, composes the greater portion of their bulk.

100 parts of starch has been converted into 110 parts of sugar, by being boiled for some time in very dilute sulphuric acid.

The gum of the cherry-tree, the plum, the peach, gum Arabic and Senegal, with all the different vegetable secretions of oil, wax, mucilage, rosin, &c. contain a considerable proportion of oxygen, with different proportions of carbon and hydrogen, modified by light and the electric fluid.

Most of these vegetable substances may be converted into sugar, by being combined with an additional portion of oxygen.

The perfection of vegetable juices seems to be that state of oxydation which forms sugar.

The gum, mucilage, starch, &c. are but the unripe juices of the plant.

This view of our subject prompts to the farmer an important practical suggestion. Sugar is known to be the most nutritious portion of vegetable matter. How then can we convert these unripe vegetable juices into the nutritious form of sugar? Let us see the process of nature, and whether we may not imitate the effects, and hasten the process by art.

Before barley can be converted into spirit as in beer, its starch must be converted into a saccharine matter: this is done by placing the grain in a heap, in contact with the atmospheric air, and moistening it with water; the starch of the grain imbibing the necessary portion of oxygen from the water and air; the heat is thence expelled, which raises the temperature of the mass to that degree which favors the union of gas, and the starch is thereby converted into a sweet mass, called malt. What the operation of nature performs in this process in four or five days, may be accomplished by art in as many hours.

Steaming vegetables in a proper manner, produces the same effect as malting does to barley. We here see the advantages obtained by steaming food for animals. Vegetable juices are in an unconcocted state; and steaming, by communicating a further portion of oxygen, brings these juices into a saccharine or sugary state, which is the most soluble and most nutritious form of vegetable matter. By inspecting the table we have given above, it will be seen what a small addition of oxygen will convert these crude juices of vegetables into the most nutritious form.

The writer of this, estimates, from experience, the advantages of steaming food for cattle at very nearly one half. Facts will be given hereafter.

Breed of Cattle.—The only reason that can be assigned why the farmer does not find the raising of cattle the most lucrative branch of his calling, is that he does not pay proper attention to the breeds he keeps. No point is so much neglected—while it is at the same time generally acknowledged that none can be more profitably attended to. If the farmer would sit down and make a careful estimate of the difference in the profit upon a good and poor animal, he would readily see the importance of this subject. The writer of this recently sold two cows of the same age—the one a good, and the other a poor cow. Both came in at three years old, and both have had a calf every spring since. Both were sold without the calf—the best for $30, and the poorest for $17. Since the sale I have, as is my custom, proceeded to "count the cost," or to estimate the *loss* and *gain* in the case. The following is the result—estimating that 25 dollars is the amount in butter, cheese, &c. obtained yearly from the best cow; that the other gave only half as much milk, and had poorer calves; and that the expense of keeping was the same for both.

best cow.

Amount in four years in butter, cheese, &c.	$100	
Amount of 4 calves, sold for $4 each,	16	
" for which cow sold,	30	
		146
Keeping four winters on hay, &c.	40	
" " " summers to grass,	16	
		56
Nett profit from cow,		90

poor cow.

Amount in four years, in butter, cheese, &c.	$50	
Amount of four calves sold for $3 each,	12	
" for which cow sold,	17	
		79
Keeping four winters on hay, &c.	40	
" " " summers to grass,	16	
		56
Nett profit from cow,		23

Now suppose that instead of raising these cows, I had bought them at the same for which the best cow sold—for at 4 years old both cows had cost me the same in raising—I then have a nett profit on the best cow of $60, while on the poorer I sustained *an actual loss of* $7. In my estimate I may not have calculated precisely the cost of keeping, &c.; but this does not affect the *difference* between the good and the poor cow, estimated from its ultimate bearing upon my purse. I only ask my brother farmers to look at this calculation and see how much they lose by keeping poor cows. On other stock the same difference exists between the good and the poor; and if those who see this fact as I do, will still persist in their neglect of their breeds, it can only be through that *almost* infatuation which sometimes dictates their agricultural *principles*.

In my next, Mr. Editor, I will briefly give my views on the best breeds, manner of improving, &c. —— A Dairyman.

The Maximum of Vegetation.—A wager is laid of ten sovereigns between two gardeners in the neighborhood of Chelsea, England, one of them undertaking to grow a salad while a shoulder of mutton is roasting, which is to be done in an hour and three quarters.

5672 patents were issued by the U. S. government during the last year, of which 690 were on subjects connected with agriculture.

[From the Genesee Farmer.]

SUGAR FROM BEETS.—We have long been desirous of laying this subject before our readers, in a more tangible shape than we have hitherto been able to do, and since the publication of our last article on the subject, a gentleman has called upon us, who has been engaged in the construction of machinery for the manufacturing of sugar from Beets, both in England and France, and is acquainted with the different operations, from the grinding of the roots, to the finishing of refined sugar.

As soon as the weather will permit, the gentleman proposes manufacturing some sugar from the Beets grown in this country, and will leave a sample at our office for inspection.

He has made the following estimate upon the cost of manufacturing in this county, but as he has lately arrived, and is but partially acquainted with our mode of cultivation, or produce of our lands, he does not pretend to be accurate in those which refer to rent, labor, and fuel, as those better acquainted with all those local circumstances might be, but as these points vary at different places, it will be easy for those who feel an interest to correct any such inaccuracy according to their location.

MR. GOODSELL:

Sir,—Seeing in your valuable paper, an article, on the manufacture of sugar from Beet roots, and being desirous to engage in that business, I beg leave to call the attention of your readers to so important a subject.

In order to bring this subject fairly before them, it will be necessary to go into details, in order to convince them of the profit attending this branch of industry, for which purpose I made calculations of the several costs attending it, as well as my short acquaintance with the country would allow me to do, and also of the produce and value thereof. In my calculations as to the quantity of beets which may be produced in this country per acre, I have been governed partly by the quantity produced in other countries, as in England and France, and partly by information collected from the most authentic sources, since my arrival in this country.

In making these calculations I have fixed upon the quantity of one acre, as being more convenient than any number of pounds or bushels, and as the produce of lands, as well as the costs of manufacturing, will be different in different parts of the United States, my calculation cannot be expected to be mathematically correct for every location.

In order to put this in the most simple form, I will first consider the expence of cultivating one acre, the quantity of beets which an acre will produce, and the cost of manufacturing them into sugar, and the probable quantity of sugar which will be produced; after which we will estimate the worth of the article in this market, and the difference of the two sums will show the profits or loss attending the cultivator and manufacturer of the article.

The rent of one acre of land,	$4,00
Preparing the same for the crop,	3,00
Cost of seed and planting the same,	3,00
Hoeing and thinning the crop,	5,00
Taking up and carting the roots,	5,00
Total cost of cultivation,	$20,00

The next thing to be considered is the quantity which an acre of good land is capable of producing.

In England and France, I have seen crops that would produce twelve hundred bushels per acre, allowing fifty-six pounds to the bushel. In this country I should calculate that nearly the same quantity might be raised, as in England or France, but not wishing to overrate, I will allow the produce to be six hundred bushels per acre, or thirty-three thousand six hundred pounds. The cost of manufacturing will vary according to circumstances, as horse team or water power are made use of, and that of concentrating the juice must be governed by the price of fuel, but the cost of grinding, concentrating the juice, chemical agents, &c. I think will not exceed forty dollars, including labor, &c.

The produce of sugar will vary according to the quality of the roots, from four to five per cent. In some instances I have known it to be as low as three per cent. but I think an average produce from the roots, may be put at about four and an half per cent. of sugar. The product of an acre, allowing six hundred bushels per acre, would at that be fifteen hundred and twelve pounds.

The quality of sugar produced from beets corresponds with what is known in this market as white Havana, and is capable of being brought to finest refined sugar. The price per hundred may safely be put at ten dollars, making the produce of an acre equal to one hundred and fifty dollars and twenty cents.

There will be after manufacturing about one hundred and fifty bushels of pulp, which is considered of the same value as brewers grain or bran, and is excellent for all the uses to which those are applied for feeding animals. This at four cents would produce six dollars.

The account will then stand thus:

Cost of producing an acre,	$20,00
Cost of manufacturing do.	40,00
	60,00
Amount of sugar produced,	150,20
Value of pulp remaining	6,00
	157,20
Nett profit per acre,	$97,20

In making the above calculations I do not pretend that it will be found exact at every place, but I am confident that I have not overrated the produce or value of the produced, and your readers will be able to correct any variation in the cost of cultivation. They will readily perceive the advantage that would accrue to the country, from the introduction of the manufacture of this article, both in an individual and national point of view.

I shall hold myself ready to give any further explanation of the different parts of the process if required, and any communication addressed to me, post paid, to the care of the Editor, will be promptly attended to. I am Sir,

Yours Respectfully,

JNO. DEW.

Rochester, Nov. 22, 1838.

[From the Domestic Encyclopedia.]

RAPE, OR COLE-SEED, BRASSICA NAPUS, L.

A valuable indigenous plant, of the uses of which we have already given a concise account. We shall, therefore, add a few particulars relative to its culture, &c. to render our statements more complete.

This plant is cultivated principally for the purpose of expressing the oil from its seed, by which it is also propagated: the best kind of the latter should be large and black; it ought to be sown in the month of June (in the proportion of 2 pounds per acre, broadcast,) with the two fore-fingers and thumb, to prevent it from shooting up in *patches;* it may likewise be drilled, at the distance of 12 or 14 inches apart. Sometimes rape and turnips are sown together; but such practice is not economical; as the two crops mutually injure each other.

Rape yields more abundantly after beans, turnips, or cabbages; the soil being previously ploughed twice, *north and south*, for the better reception of the solar heat; and, if transplanted, such plants will vegetate with uncommon luxuriance, so as amply to repay the additional expense.

Rape seed attains maturity from July to September; and, as it is easily shed, the plants are generally cut with sickles; laid on the ground to dry; and the seed is rubbed out on a large cloth spread in the middle of the field, whence it is conveyed to the mill. The oil which these seed yield by expression, is employed for various useful purposes in domestic life, and particularly for burning in lamps; but, as it is apt to become ranced, M. THENARD has published the following practical method of *purifying* it. He directs 1½ or 2 parts of concentrated sulphuric acid to be added to 100 parts of oil, and the whole to be perfectly incorporated by agitation: the fluid immediately becomes turbid, assuming a dark green cast: and, in the course of three quarters of an hour, the coloring particles begin to collect in lumps. The agitation must now cease: and double the weight of oil or vitriol, diluted with pure water should be added: in order to mingle these different ingredients, the stirring ought to be renewed for the space of half an hour; after which the whole may be left to settle for seven or eight days. At the end of that time, the oil will be found on the surface; on being gently drawn off, and filtered through cotton or wool, it will be almost entirely divested of color, smell, and taste; so that it will burn clear, without any interruption.

The refuse of rape, after expressing the oil, is known by the name of *rapecake;* the economical uses of which we have already stated. The whole plant is of great service in feeding cattle; and, after the seed is threshed, the straw and chaff, on being burnt, afford ashes equally valuable as the best potashes.

A Protestant Clergyman was once hissed in a promiscuous congregaiton for his faithfulness in exposing their prevailing vices. "I come here," was his ready and pointed reply, "to bruise the head of the Old Serpent, and it does not at all surprise me that there should be some *hissing among the generation of Vipers.*"—*Ch. Obs.*

THE BREEDER & MANAGER.

IMPORTED HORNED CATTLE.

[From the New York Commercial Advertiser.]

A few days since we attended, upon invitation, the private exhibition of a herd of full blooded English cattle, just imported, and destined to graze upon the rich prairies of the Scioto. Our highest expectations were realized—for it may well admit of doubt whether the animals who cropped the herbage of the rich plains of Judea, some three thousand years ago, surpassed in beauty, according to the most approved standards of agricultural taste, the bevy of cornuted animals to which we allude, from the other side of the Atlantic. They were imported under the auspices of a society established in the State of Ohio, for the furtherance of agricultural improvement.

It seems that at the "Agricultural Fair and Cattle Show of Ross County Agricultural Society," held in Chillicothe, in October last, a discussion was had upon the expediency of forming an association for the purpose of introducing English cattle in this country by direct importation. The proposition was favorably received; and the requisite funds to justify the undertaking were, in a few hours, subscribed. A meeting was subsequently called, and an association organized to carry it into effect. After some deliberation, it was resolved to empower the President and Directors to employ an agent or agents for the purpose, with liberty to control and distribute the funds according to their best judgement and discretion. But, previous to any definitive action on the subject, letters were written to the Hon. Henry Clay, and other distinguished individuals, soliciting their opinions upon the course most proper to be pursued. They united in recommending that an intelligent agent be appointed to repair to England, and make the proper selections. This advice was followed, and Mr. Felix Renick was appointed to the trust, to be accompanied by one or two young men as his assistants.

They left Chillicothe in January last—embarked in this city in February, and arrived at Liverpool on the 24th of March. After arranging their money transactions, they proceeded to the interior, and visited most of the agricultural districts celebrated for raising fine cattle.

It may be proper, in an article of this sort, designed especially for our agricultural readers, to relate the observations made by our western farmers upon the various races of cattle they examined in different parts of England.

They were at one time highly pleased with the *long* horn or Lancashire breed, distinguished from all others by the length of their horns, the thickness and firm texture of their hides, close hair, large hoofs, with coarse leathery thick necks, and varied in color, with a white streak along the back.

Again, the Devonshire cattle were recommended to their attention, with the bright red color and ring around the eye, fine bone and clean in neck, thin faced and fine in chops, thin-skinned, silky in handling, and fine models for the yoke. Again, they were led to view the Galloway hornless breed—broad on the back and loins, with hooked bones, projecting knobs, with bodies beautifully rounded, deep in chest and short in leg—and clean in the chop and neck—with heavy eye-brows, calm and determined look. Thus they moved on, receiving every where the kindest attentions and most obliging hospitality; and having seen and weighed the "points" of rival breeds, they could not hesitate in giving their preference to the *short horned* breed, to which we have alluded as coming under our personal observation. These are sometimes called the Dutch breed, and are known in England by a great variety of names according to the districts where they are raised, such as Holderness, the Teeswater, the Yorkshire, Durham, Northumberland, &c. The Teeswater, raised in the vale of York, on the river Tees, are held in the highest estimation, and are the true short-horned breed. Bulls and cows of this stock, purchased at great prices, are spread through the north of England and the border counties of Scotland—and of this breed is the present importation. We have never seen so fine bone, head and neck, as those cattle present—the hide is thin, chin full, loin broad, and the body throughout well proportioned and comely; the flesh of which is said to be equal or superior to any other breed. The cows are remarkable for yielding a large quantity of milk, not unfrequently twenty-four quarts in twenty-four hours, during the grass season, and sufficient for making no less than three firkins of butter during the summer.

This breed was deemed in many respects best adapted to American soil. The growth is quite equal, if not superior, to any other breed; their great weight of edible flesh, in proportion to bone and coarse flesh—the facility with which they can be fattened, at any age, and to almost any extent, besides being considered the best milkers in England—seemed to give them a decided preference over all others. Purchases were accordingly made from the finest specimens, without reference to cost—giving as high as £170 sterling for a bull calf of ten months old, and 150 guineas for a yearling heifer. Eleven were embarked for Philadelphia, in the ship Alleghany, and the remaining nine, under charge of the agent in person, were put on board the ship Portsmouth, which, on the 4th of June, sailed for this city. Having two hundred steerage passengers on board, the Captain, with the view of avoiding sickness on his passage, took what may be called a northerly track, and, after much suffering, and encountering some heavy *blows* and rough weather, arrived in this city, and landed the animals, in fine condition, on the 26th July, the other division having previously reached Philadelphia in safety.

Great care is observed in England by the breeders of fine cattle, to preserve the blood untainted and unmixed. They have their regular Herd Book, by means of which they can trace the *genealogy* of their animals almost as far back, from sire, to sire, as the aristocratic sportsman his stud of racers, or as a sprig of nobility would recount the names and genealogy of the ancestry of which he boasted.

The two bulls which arrived here were three years old, and were by far the noblest animals of the species that we saw. They were ten or twelve feet long—not measuring the tails—and fourteen or fifteen hands high—very large, and of beautiful form and proportion. One of them weighed 2,114 lbs. and the other upwards of 2,000 lbs. The heifers were also all of very remarkable size for their ages. The two year olds were larger than our common full grown cows. Ohio has already become distinguished for the enterprise of her herdsmen, and her dairies are producing rich returns. But if she fills her luxuriant prairies and her rich valleys with cattle like these, the agriculturists of other states must needs soon bestir themselves, or they will be left far in the rear by the noble spirit of western competition.

Mr. Renick being anxious to proceed with his valuable charge, remained but a few days in this city. Many repaired, however, to see his fine cattle, and liberal advances were offered on cost. Five hundred dollars were proffered for a bull calf only a few months old; but the company, having higher objects in view than immediate gain, were not disposed to sell them. We wish Mr. R. a safe arrival to the Great Valley of the Scioto. It has been said that he who makes two blades of grass grow on the spot that had only produced one, is a greater benefactor of the human race than the whole herd of politicians put together. With equal justice may the compliment be paid by the people of the West to the authors of this enterprise.

[From the Farmers' Series.]

The Short-horns.

It would answer no useful purpose, and would certainly be an objectionable course, to bring under particular notice any one or more of the highly valuable stocks of improved short-horns of the present day. To enumerate all would be impossible; and the writer of this account would most studiously avoid any partial or invidious comparison. The same objection does not, however, exist, as to a remote period; and it is but justice to state that Mr. Robert Colling, brother of Mr. Charles, (who certainly was the leader, and surpassed all competitors in the improvement of the short-horns,*)

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*Mr. Robert Colling's stock was not sold off until the 29th September, 1818, when the following great prices were obtained for some of his cattle, a sufficient proof of the estimation in which they were held:—

One 2-year old cow sold for	331	guineas.
One 4-year old cow "	300	"
One 5-year old cow "	270	"
One 1-year old bull-calf "	270	"
One 4-year old bull "	621	"

It appears by the catalogue, with printed prices affixed, that

34 cows sold for	4141	guineas.
17 heifers for	1287	"
6 bulls for	1343	"
4 bull calves for	713	"
61 head of cattle sold for	7484	"

Ten days afterwards, General Simson's stock of the same breed were sold at his seat at Pitcorthie, Fifeshire. As a proof of the established reputation of the short-horns, even so far north, and the degree to which they would even then thrive, in a climate so different from their native one, it may be stated that 12 cows, 5 two-year old heifers, 3 bull-calves, 7 bulls, 4 one-year old heifers, and 6 quey calves, 37 in all, sold for 1388 guineas, or nearly £40 per head.

Mr. Charge, of Newton, near Darlington, and Mr. Mason, of Chilton, in the county of Durham, were only second to Mr. Charles Colling in his interesting and useful pursuit. Mr. Mason started early with animals derived, it is believed, from Mr. Colling, in the very commencement of his career; and Mr. Charge, who had long possessed a most valuable stock of Teeswater cattle, had at an early period crossed them with Mr. Colling's best bulls, and was one of the spirited purchasers of Comet, at a thousand guineas. Mr. Mason's late successful sale sufficiently stamps the value of his stock at that period, but, it is generally admitted, the system of crossing with other herds, which he had of late years judiciously adopted, proved highly instrumental in restoring those qualities in his own, which too close breeding had in some degree threatened to deprive them of.

It would be unfair, on this occasion, to omit mention of a veteran breeder, to whom the advocates for the preservation of pedigree are indebted for the 'Short-horn Herd Book'—Mr. George Coates. He is now one of the oldest authorities on the subject in existence, and was once the possessor of a very superior race of short-horns, though somewhat coarse. Portraits have been preserved of some very fine animals bred by him; and he had the solid satisfaction to dispose of his bull *Patriot* for five hundred guineas.

Mr. Coates fell into an error, but too common, and generally equally fatal: he fancied his own stock the best, and disdained to cross them with Mr. Colling's; which, as others afterwards proved, would have been a most judicious proceeding. The consequence was, Mr. Colling's sale having settled the public judgment and taste, Mr. Coates' stock fell into disrepute. If an apology be requisite for this statement of an undeniable fact, it will be found in the utility of holding up such an example as a caution to those who may be in danger of falling into a similar error.

The next object will be to show the capabilities of this breed to make a return for food consumed, and the unparalleled early period at which such return may be made. Indeed, *early maturity* is the grand and elevating characteristic of the short-horns, and their capacity to continue growing, and at the same time attaining an unexampled ripeness of condition at an early age, has excited the wonder, and obtained the approbation, of every looker-on not blinded by prejudice.

In order to do justice to the subject, and to show that these properties are not all of recent acquirement, but were possessed in an eminent degree by the Teeswater cattle, as well as the improved short-horns, it will be requisite to return to the former for a few facts in evidence.

About fifty years ago, Sir Henry Grey (of Howick) bred two oxen, which were fed by Mr. Waistel, and when six years old weighed 130 stones each, 14 lb. to the stone; their inside fat being most extraordinary.

A heifer, three years old, bred by Miss Allen (of Grange), fed on hay and grass alone, weighed 90 stones.

Two three-years old steers, bred by the same lady, and similarly fed, weighed respectively 92 and 96 stones.

Mr. Waistel's four-years old ox, by the bull supposed to be the grandsire of Hubback, weighed 110 stones.

A four-years old ox, bred by Mr. Simpson (of Aycliffe) fed on hay and turnips, weighed 135 stones.

About the same period, a five-years old heifer, bred by a bishop of Durham, weighed 110 stones.

A cow of Mr. Hill's, slaughtered in Northumberland, weighed 127 stones.

Mr. George Coates, before-mentioned, slaughtered a heifer, by the supposed sire of Hubback, which, fed on turnips and hay, weighed, at two years and two months old, 68 stones.

An ox and heifer, bred by Mr. Watson (of Manfield), weighed, at four years old, within a few pounds, 110 stones each.

A sister to Mr. G. Coates' *Badsworth*, having run with her dam, and fared as she did, without cake or corn, met with an accident, and died when seven months old; she weighed 34 stones.

A steer, by a brother to the above heifer, three years and two months old, weighed 105 stones; and another steer, by the same bull, exactly three years old, weighed 95 stones. Both were kept as store-beasts till two years old.

An ox, bred by Mr. Hill (of Blackwell) slaughtered at six years old, weighed 151 stones 10 lbs.; tallow 11 stones.

The Howick red ox, seven years old, weighed 152 stones 9 lb.; tallow 16 stones 7 lb.

Mr. Charge's ox, seven years old, weighed 168 stones 10 lb.; tallow 13 stones.

The foregoing instances of weight and proof all satisfactorily show, that in the Teeswater cattle, Mr. Charles Colling had pretty good materials with which to commence operations. Let us now refer to a later period, and state some particulars respecting their descendants, the improved short-horns.

In the year 1808, Mr. Bailey, the agricultural historian of Durham, informs us, he saw, at Mr. Mason's (of Clinton) a cow, not less remarkable in point of fat than the Durham ox. At that time, the depth of fat, from the rump to the hips, in a perpendicular position, was not less than twelve inches; and the shoulder score at least nine inches thick.

Mr. Robert Colling's heifer, which, like the Durham ox, was exhibited as a curiosity, was estimated, at four years old, to weigh 130 stones.

The same gentleman sold, in Darlington Market, on the 18th of April, 1808, a two-years old steer for £22; the price of fat stock being at that time seven shillings per stone.

At M. Nesham's (of Houghton-le-Spring), Mr. Bailey saw a steer, 25 months old, completely covered with fat over the whole carcase, and supposed to be the fattest steer of his age ever seen. Butchers estimated him to weigh 75 stones.—Neither of the last-mentioned were of large size, and would not have weighed above 40 stones had they been no fatter than those usually slaughtered.

Mr. Wetherill (of Field House) sold at the fair in Darlington, in March, 1810, two steers, under three years old, for £47 10*s* each. The price of cattle at that fair, 10*s* per stone.*

*Mr. Bailey observes, that the common practice among the breeders of the improved short-horns, and which he first observed at Mr. Wetherill's, was to put the year old heifers to the bull the beginning of July, so as to calve not later than the middle of May. The calves ran with and sucked their dams until August. The cows were then put upon foy, fed through the winter with turnips, and sold to the butchers in May or June following, for £25 on an average, which, with the value of the calf, could not be reckoned at less than £30 for a three-year old heifer.

[From the London Lancet.]

Lectures on Veterinary Medicine,

Delivered in the University of London, by Mr. Youatt.—Lecture iii.—(concluded.)

fistula lachrymalis.

From some occasional acrimony of the tears the membrane lining this duct may inflame and thicken; or some foreign body may institute itself into the duct; or some unctuous matter from the ciliary glands; and the fluid accumulates in the sac and distends it, and it bursts; and the ulcer eats through the integument, and there is a small fistulous opening beneath the inner canthus of the eye, with a constant discharge from it. It is the constant discharge from it that prevents the wound from healing, and, in some cases, the lachrymal bone is involuted in the ulcerative process, and becomes carious.

This happens so seldom in the *Horse*, that the existence of fistula lachrymalis has been denied in him, but there are cases of it on record, and there are few who have not seen the enlargement of the sac preparatory to it: viz. the soft tumour evidently filled with fluid, easily pressed out, and escaping either from the eye or through the nose. When this has been neglected, and the fluid has become viscid, inflammation and ulceration and caries have ensued.

Our continental neighbors, who are very ingenious in devising plans of treatment for various diseases which I believe even they would find it difficult to carry into execution, have told us to inject some bland tepid fluid through the lower punctum, and thus cleanse the sac from obstruction; but I have not been told the means by which I shall accomplish this in spite of the powerful action of the retractor muscle. This being ineffectual we have been advised to pass a style, as in the human being, into the duct; but I should be puzzled how to introduce this style, whether through one of the puncta, or through the orbicularis muscle, or by making a way for it through the lachrymal bone into the lower part of, or below, the sac, and I should be more puzzled still to make my patient, who would not do as I bade him, keep the style in its situation a single hour, much more the length of time necessary to ensure the pervious state of the duct. I believe that you must leave the case to itself, paying attention only to cleanliness.

In the Dog, however, and particularly in the smaller spaniel with the watery eye, fistula lachrymalis is of no unusual occurrence. You will recognize it by the small ulcer in the situation that I have described, with a constant, but perhaps slight, discharge of pus. Have nothing to do with that ulcer, for you will never heal it. You will gain most reputation by honestly saying at once, "I can do nothing here." There is even no palliative but cleanliness.

When fistula lachrymalis occurs in the horse, it is oftenest from fracture of the lachrymal or superior maxillary bone; but that can rarely happen in the dog on account of the depth of muscle by which the parts are protected. In him it arises from disease of the eye, or a naturally inordinate secretion of tears.

With regard to the *canalis infra-orbitarius*, or the long canal conveying the anterior maxillary nerve to form the *facial nerves*, I will content myself with pointing out its situation and course from the hiatus at the tuberosity of the superior maxillary, to the upper part of the middle portion of the facial surface of that bone.

THE GARDENER.

Science of Farming and Gardening.—We give an extract below from the English Gardener's Magazine—some of the hints are worthy of notice. It is very true that the farmer and the horticulturist should be instructed in all the different sciences mentioned below, and it is no less so that there is such an intimate connection between the different branches of science, that any one branch must call to its aid the other sciences, to which again in its turn, it renders important facilities; and the agriculturist is greatly interested in all of them. How often is the labor of the farmer entirely frustrated by the inroads of some little insect, which is scarcely discernable to the naked eye, with the history and habits of which, he is totally unacquainted; and perhaps, had he been an entomologist, he might have saved his crop by defeating his invisible enemy, which he has unknowingly protected from the wintry frost or summer's heat. A knowledge of insects ought to form an important part of the education of an agriculturist; but we agree with our English author, it must be taught to boys. In adults there is too much prejudice to expect much improvement from them.

[From the Gardener's Magazine.]

Instruction in the Sciences which explain the Process of Nature in Farming and Gardening.—We have noticed the *Cottage Farmer*, by Mr. Lance; and we shall here quote a paragraph from the close of his pamphlet:—"The writer of this essay proposes to instruct young men in the sciences of geology, chemistry, botany, and the elements of all the physical sciences; which will elucidate points necessary to be known by farmers, and combine these branches with the practical knowledge which now conducts the agriculture of the country; and to use that science as an addition, and in subordination, thereto. In agriculture, the sciences are all conjoined; they cooperate to produce bread, and open a boundless field to enquiry. The botanist finds himself indebted to the chemist; the chemist finds problems, in searching into the physiology of plants, which the botanist must solve. The zoologist, the geologist, mineralogist, the meteorologist, the entomologist, are so linked together, that they cannot proceed far without the assistance of one another; and whatever tends to cement the sciences, and bring their various branches into contact, will much facilitate the progress of agricultural knowledge." An agriculture college, for the instruction of young men in the theory and practice of farming, is, in consequence of the above opinions, proposed to be formed by Mr. Lance. Let it be established; it can do no harm, even if it does no good. We fear, however, that the time is gone for establishing institutions of this sort. The farmers of this country are, and ever have been, too ignorant to make use of the knowledge which is every day set before them; they are too much prejudiced to benefit even from example. We have lately had abundant evidence of this during a seven weeks' tour. There is nothing to be expected from them but by the education of their children in their infancy, and at parochial schools. As we believe Mr. Lance to be ardently desirous of improving the agriculture of the country, we would entreat of him to consider whether the most effectual mode would not be to direct all his efforts towards inducing the legislature to establish a national system of education, such as that proposed by Mr. Roebuck in the last session of parliament, of which he will find an account in the *Examiner* for August 11."—*Cond.*

[From the Gardener's Magazine.]

On the Importance of Liquid Manure in Horticulture, and the peculiar advantages of Soot as an Ingredient for that purpose. By Mr. John Robertson, F. H. S. Nurseryman, Kilkenny.

Amongst the many advantages which horticulture has derived from Mr. Knight's enlightened application of science to its practice, we my reckon as not the least important, his earnest and repeated recommendation of liquid manures. In general, liquid manures have not had that importance attached to them by gardeners which they merit. They may at all times be resorted to with advantage; but, in a number of instances, and particularly where immediate effects is required, no other manure can be so well applied. To enumerate their uses and preparation, however, would demand more consideration than I am enabled to bestow;—my present object being solely to point out a material for the purpose, which I have long availed myself of with success, though it seems to have been overlooked by most gardeners—it is soot.

Sir H. Davy characterizes soot as "a powerful manure, possessing ammoniacal salt, empyreumatic oil, and charcoal, which is capable of being rendered soluble by the action of oxygen, or pure vital air;" all which component parts rank high as nutritious or stimulant manures. On meadows I have used soot with great advantage in substance, and though sown by the hand, one dressing gave me always heavy crops of hay for two successive seasons; but this is a wasteful mode of applying it, a great proportion of its ammonia, one of its most active ingredients, being volatilized and dissipated in the atmosphere. When dissolved in water there is no waste:—it is all available, and for horticultural purposes I have mostly used it in that state, mixing it up in the porportion of about six quarts of soot to a hogshead of water. Asparagus, peas, and a variety of other vegetables, I have manured with it with as much effect as if I had used solid dung; but to plants in pots, particularly pines, I have found it admirably well adapted: when watered with it, they assume a deep healthy green, and grows strong and luxuriant. —I generally use it and clean water alternately, and always overhead in summer; but except for the purpose of cleaning, it might be used constantly with advantage; and though I cannot speak from my own experience, never having had either scale or bug on my pines, (pine apples) yet I thing it highly probable, as the ammonia it contains is known to be destructive to these insects in a state of gas or vapour, that in a liquid state, it does not totally destroy them, yet that it will in a great degree check their progress.

Other materials for liquid manures are often difficult to procure, and tedious in their preparation: but soot, sufficient for the gardener's purposes, is almost every where at hand, and in a few minutes prepared.

Were gardeners more generally aware that no manures can be taken up in a state of solidity by plants as food, and that they can only be absorbed by them in a gaseous or liquid state, to which all solid manures applied must be previously reduced, before any benefit can be derived from them, they would in many cases facilitate the process by using them *in a liquid state*. In houses (green and hot houses) where the rains have not access, it appears to me superior to any other mode of administering manures to trees.

Kilkenny, Aug. 24, 1826.

Quere.—Has any system been adopted for collecting at one or more deposits the soot of this and other large cities? Might it not be easily done through the superintendants of chimney sweepers?

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On destroying the Insects which infest Fruit Trees.—It is of the utmost importance to the success and general well-being of all fruit trees, that they be kept perfectly clear from insects, parasites of all sorts, and all extraneous matters. Winter is the best season in which to operate for effecting this object; and, with regard to fruit trees trained against walls, we ought to commence by loosening all of them from the wall, and giving them regular and judicious pruning. After this, begin upon the main stem, even below the surface of the earth, by removing a portion of the soil, and diligently scrape or pare, if the case be such as to require it, every part, even to the extremity of each branch. Afterwards wash the whole of the wall most completely with the following preparation:—Take strong lime-water, after it has settled into a perfectly clear state, (so that none of the lime remains, farther than what it holds in solution) and mix in it about a fourth part of strong tobacco liquor; some soft soap, 1 lb. to a gallon; and about 1 lb. of flour of brimstone, or of sulphur vivum, either will answer: if some black pepper, ground very fine, be added, it will be an improvement. This preparation will clear the wall most completely from every kind of insect. After the trees are again dry, have a mixture ready, composed of the above ingredients, but in stronger proportions; and, instead of the

lime-water, use chamber-lie, or the strong drainage of a farmyard; and, lastly, thicken it to the consistence of good thick paint, with quicklime dissolved in it. Take painters' brushes of different sizes, and coat the trees completely over with the mixture, not leaving a chink, or the axil of a bud, without working the mixture well into it. Use the whitest lime you can get for the purpose, that when dry, you may readily see where the brush has missed. It is best to coat every part completely over two or three times, and it will kill every thing that is not concealed in the bark. In pear trees, the insects of the last class are our greatest pest. I wish some one would be kind enough to inform us how to get rid of the warty pest, which does not, I believe, commit its greatest ravages in that state. Will Rusticus of Godalming be so kind as to give us the history of this destructive insect? I think we have no enemy so resistless as this; all others fall beneath the above dressing.

On limiting the extension of the roots of Wall Trees.—I am a strong advocate for confining the roots of wall trees, as well as those of grape vines; and I assure you, that if it is judiciously executed, it is a most excellent practice. I only allow 18 in. for the depth of soil in my borders, upon a well-laid paved bottom, hollow underneath; with a flue, or hot-water pipes, if either of these can be had, in the hollow; the joints being securely cemented, to prevent the roots from striking through into the chambering. I wall in my roots at 6 or 8 feet from the main wall, although less will be sufficient; and place plugs in shafts, through the paved bottom, at suitable distances, to enable me to drain it perfectly in very rainy weather, heavy falls of snow, or rapid thaws. Let the soil in which the trees are planted be used as soon as it can be got together, by paring it off a fine pasture field, or a fine sheepwalk, taking the turf only about 3 in. thick; if not very good, 1 to 2 in. will suffice, and the fresher it is used the better.

From the Genesee Farmer.

Culture of Onions.—The account given in a late number of the Farmer, of the beneficial effects of charcoal dust in the culture of onions, reminds me of an experiment made by one of our farmers last year, and which I think may be turned to good account. He had prepared his onion beds in the usual manner, sowed his seed at the proper time, but the seed did not come up, and his beds were soon covered with young weeds which grew unmolested. After he had finished his corn planting, he procured some good seed, and to refit his beds for its reception, covered the surface with straw to the depth of a foot or more, and burned it over. By repeating this operation the ground was completely cleared of the weeds, and without stirring the surface more than was necessary to deposite the seed, he sowed them; they grew finely, no weeds came up, and he had a fine crop of onions. This year he caused his onion ground to be prepared early, that the weeds might have time to start before the time of sowing, when he as last year burned straw over his beds, and sowed his onions. By this proceeding he secures two important ends—he eradicates all weeds from the surface, and the ashes and charcoal of the straw furnish the best possible dressing for the onions. W. G.

Otisco, May 30, 1834.

MISCELLANEOUS.

We feel much gratified at the prosperous appearance of the Baltimore Union Lyceum.—It is one part of the plan of this association to procure specimens in Geology and Botany of all that can be found within a circle of five miles round Baltimore, and in all cases to obtain duplicates or treplicates of each article, that they may have specimens to exchange with other lyceums at a distance, for such articles as do not exist in this place. It is evident that this plan, if persevered in, will in a short time present us with a cabinet of minerals, and a hortus siccus that may contain a specimen of every mineral and valuable plant in the United States. This would form a most valuable auxiliary in education and in the arts, as well as in agriculture. No class of persons would be more benefitted by such information than the farmers. We will give an instance in point.

About twenty-five or thirty years ago, an English gentleman, who was on a visit to Philadelphia, took a ride into the country on the Jersey side of the Delaware. About 14 miles south of the city, he discovered large banks of a black earth—on riding up to the tavern he enquired of some persons if they knew what it was in those banks. No one knew that there was any thing of value contained in them. He told them that those banks were of more value than the mines of Peru; that it was marl; and informed them how to use it. It was used, and found to be an invaluable manure. If we were to say that this piece of geological information had been worth a million of dollars to that state, we should be far below what has been realized. Whole districts have been reclaimed from the most perfect sterility, to become the most luxuriant meadows, by the use of this marl. So much for a knowledge of Geology.

March of Improvement.

A distinguished French citizen, who has but lately retired to private life, has founded an establishment for the preparation of food, to supply the inhabitants of Paris with good dinners ready cooked, at their doors. Vehicles loaded with victuals, are to ply the streets of Paris at all hours. A French paper, in alluding to this undertaking, says: "Behind these vehicles will be very splendid buffets filled with pullets, chickens, and game of every sort, &c. ready for the spit. The sound of a trumpet will announce the approach of the gastronomic omnibus, and will probably attract numerous purchasers."

Tomatoe Catsup.

Ingredients.	*Quantity.*
Tomatoes,	¼ peck,
Salt,	a common tea cup full,
Vinegar,	½ pint: strong,
Cloves,	a table spoonful of each.
Alspice,	
Black pepper,	
Cinnamon,	7 or 8 sticks, each about 6 inches long.

Slice and boil the vegetable—pass the mass through a sieve—after which boil all the above together thoroughly—let the catsup stand until cool—then stir and bottle it.

This sauce when well prepared and bottled, may be preserved in good condition two or three years.

Baltimore, August 7th, 1834.

Stricken by Lightning.—"It ought to be known generally, that persons struck by lightning, and apparently dead, are sometimes recovered by the copious application of cold water externally, particularly upon the face."

We can attest the efficacy of the forgoing application, copied from the Philadelphia paper. During a tremendous storm, a few years since, we passed the shop door of a young gentleman, who had been stricken by lightning, and was lying, supposed dead, on his back on the floor, in which situation he had remained some time. A full bucket of cold water was dashed into his face, when respiration returned. This was at ten in the morning; he was carried home and placed in a bed and at four in the afternoon his senses were restored, and was entirely unconscious that any accident had happened to him, except that he was nearly blind. His sight by degrees came to him, but it was not till two years afterwards that his eyes were completely restored. We are informed that the application of cold water to the spine is also recommended, both to persons struck by lightning and by the sun.—*N. Y. Commercial.*

Musical Boxes.—Talking of musical boxes puts me in mind of an amusing trick played off by our facetious friend Brown, who took an opportunity of slipping one of these ingenious little instruments under the lid of a pigeon pie, and a pic nick, and insisted that it was that celebrated "dainty dish," containing "four-and-twenty blackbirds," formerly so great a favorite at the royal table, but that, not being baked enough, the birds had set a singing before their time.—*New Monthly Mag.*

A single grain of wheat, on the farm of Asher Paxson, in Solebury, Bucks County, produced, the present season, twenty eight well grown ears.

CONTENTS OF THIS NUMBER.

To our Patrons—Gama Grass Seed Wanted—Manufacture of Silk—African Vegetation—Maryland Horticultural Society's Report—Large Calf—Agricultural Chemistry: Oxygen—Breed of Cattle: difference between good and poor—The Maximum of Vegetation—Patents—Sugar from Beets—Rape, or Cole-seed—Anecdote—Imported Horned Cattle—Short-horn Cattle—Dr. Youatt's 3d Lecture concluded: Fistula Lachrymalis—Science of Farming and Gardening—On Liquid Manure—On Destroying Insects on Fruit Trees—On Roots of Wall Trees—Culture of Onions—Baltimore Union Lyceum—March of Improvement—Tomatoe Catsup—Lightning—Musical Boxes—Large Produce from a Grain of Wheat.

BALTIMORE PRODUCE MARKET.

☞ *These Prices are carefully corrected every* MONDAY.

	PER.	FROM	TO
BRANDY, Apple,	gallon.	$0 27	$—
Peach,	"	75	—
BEANS, white field,	bushel.	2 00	—
BEEF, on the hoof,	100lbs.	4 50	5 25
CORN, yellow,	bushel.	64	65
White,	"	65	66
COTTON, Virginia,	pound.	10	13
North Carolina,	"	11	13
Upland,	"	14	15
FEATHERS,	pound.	—	37
FLAXSEED,	bushel.	1 00	1 25
FLOUR—Best white wheat family,	barrel.	6 50	7 00
Do. do. baker's	"	6 00	6 50
Do. do. Superfine,	"	5 25	5 37
Super Howard street,	"	5 12	5 —
" " wagon price,	"	5 00	—75
City Mills, extra,	"	5 50	5 37
Do.	"	5 25	5 37
Susquehanna,	"	5 25	—
Rye,	"	3 37	—
GRASS SEEDS, red Clover,	bushel.	4 50	—
Timothy (herds of the north)	"	3 00	—
Orchard,	"	3 00	—
Tall meadow Oat,	"	2 50	—
Herds, or red top,	"	1 25	—
HAY, in bulk,	ton.	—	13 00
Pressed,	100 lbs	—	90
HEMP, country, dew rotted,	pound.	6	7
" water rotted,	"	7	8
LIME,	bushel.	30	35
MUSTARD SEED, Foreign,	"	4 50	5 00
Domestic,	"	5 00	—
OATS,	"	30	32
OIL, linseed,	gallon.	—	90
Castor	"	1 70	1 80
PEAS, red eye,	bushel.	—	—
Black eye,	"	—	—
Lady,	"	—	—
PLASTER PARIS, in the stone,	ton.	2 75	3 00
Ground,	barrel.	1 37	—
PALMA CHRISTA BEAN,	bushel.	2 00	—
RAGS,	pound.	3	4
RYE,	bushel.	62	—
TOBACCO, crop, common,	100 lbs	3 50	5 00
" brown and red,	"	4 50	6 00
" fine red,	"	6 00	8 00
" wrappery, suitable for segars,	"	6 00	12 00
" yellow and red,	"	8 00	12 00
" yellow,	"	13 00	17 00
" fine yellow,	"	15 00	22 00
Seconds, as in quality,	"	4 00	5 00
" ground leaf,	"	5 00	9 00
Virginia,	"	4 00	—
Rappahannock,	"	3 00	4 00
Kentucky,	"	4 00	8 00
WHEAT, white,	bushel.	1 06	1 12
Red,	"	85	1 00
WHISKEY, 1st pf. in bbls	gallon.	28	29
" in hhds	"	26	—
" wagon price,	"	—	—
WAGON FREIGHTS, to Pittsburgh,	100 lbs	1 75	—
To Wheeling,	"	1 50	—
		washed.	*unwash*
WOOL, Prime & Saxon Fleeces,	pound.	50 *to* 60	24 *to* 26
Full Merino,	"	40 50	22 24
Three fourths Merino,	"	35 42	22 24
One half do	"	30 35	21 22
Common & one fourth Meri.	"	28 30	18 20
Pulled,	"	28 31	18 20

WOOL.

LYMAN REED & CO. Commission Merchants, No. 6 S. Charles street, Baltimore. Md.—devote particular attention to the sale of WOOL. All consignments made them will receive their particular attention, and liberal advances will be made when required. May 9.

SUBSCRIBERS can have their volumes of the AMERICAN FARMER neatly half bound and lettered at this establishment, at 75 cents a volume. Most of the Nos. can also be had at 10 cents each, to complete files.

BALTIMORE PROVISION MARKET.

	PER.	FROM.	TO.
APPLES,	bushel.	$0 50	$—
BACON, hams,	pound.	11	—
Shoulders,	"	—	9
Middlings,	"	—	10
BUTTER, printed, in lbs. & half lbs.	"	31	—
Roll,	"	12	20
CIDER,	barrel.	—	—
CALVES, three to six weeks old	each.	4 00	7 00
COWS, new milch,	"	15 00	27 00
Dry,	"	9 00	12 00
CORN MEAL, for family use,	100lbs.	1 62	1 75
CHOP RYE,	"	1 50	1 56
EGGS,	dozen.	9	—
FISH, Shad, trimmed	—	—	—
" salted,	barrel.	6 37	—
Herrings, salted, No. 1 & 2,	"	3 87	4 00
Mackerel, No. 1, 2 & 3,	"	4 25	—
Cod, salted,	cwt.	—	2 75
LAMBS, alive,	each.	1 25	2 00
Slaughtered,	quart'r	31	50
LARD,	pound.	8	—
ONIONS,	bushel.	—	73
POULTRY, Fowls,	dozen.	—	—
Chickens,	"	2 50	2 75
Ducks,	"	—	2 50
POTATOES, Irish,	bushel.	—	62
Sweet,	peck.	50	—
VEAL, fore quarters,	pound.	7	—
Hind do.	"	8	—

ADVERTISEMENTS.

SALE OF VALUABLE CATTLE.

THE subscriber intending to break up his Dairy Establishment, will offer at public sale on THURSDAY, the 12th of September next, at his residence near Brookville, Montgomery county, Md. his entire stock of COWS, amounting to 30 head. They are all of the improved Durham Short-Horned, crossed with the stock of the Oakes' Bull, which was raised by Mr. Oakes of Massachusetts, and got by the imported bull Coelebs, and was exhibited and took the premium at the Cattle Show near Baltimore, which was held at the house of the subscriber's brother, Wm. Frame, from whom he procured the young Oakes Bull. The cows are all in fine condition, and worthy the attention of improvers of stock.

Terms made known and attention given on the day of sale. DAVID FRAME.

aug. 26 2t

MORUS MULTICAULIS.

THE subscriber has on hand a few hundred of this celebrated Tree, unrivalled in the quality of its leaves as food for the silk worm, for which he is ready to receive orders (accompanied by the cash) with *particular* directions for the delivery of the trees on or after the first of Nov. next. Price 50 cents each, $5 per dozen, or $40 per hundred.

The success and ease with which this tree is propagated, the extraordinary quickness of its growth, the superiority of its leaves over *all* others for the silk culture, and its uncommon luxuriance and beauty, altogether recommend it to the favorable notice of *every farmer* as a most valuable acquisition. I. I. HITCHCOCK,

aug. 26. Amer. Farm. Establishment.

TWO VALUABLE SLUTS

ARE offered for sale, each about one year old. The first is a *Pointer* of the very best blood; color brown with some white. She may easily be broke this fall.

The other is out of one of the beautiful grey hound Sluts sent last year from Holland to the President of the U. S. by a fine pointer sent out with the greyhounds. The slut offered is a most beautiful black animal, very active, and appears to have the nose of the pointer with the speed of the grey-hound. Price of each $10. Apply to

aug. 26 I. I. HITCHCOCK.

A MARE IN EXCHANGE FOR CATTLE.

A GENTLEMAN of Virginia is desirous of exchanging a valuable blooded brood Mare for thorough bred Durham short horn Cattle—for sheep of the best blood, or for a good Jackass. Should any gentleman be disposed to make such a barter, he shall receive further information on application to I. I. HITCHCOCK,

aug. 12 Amer. Farm. Estab.

TURNIP SPINACH & CABBAGE SEED.

A FULL supply of these seeds of several of the best varieties for summer and fall sowing, now on hand and for sale by I. I. HITCHCOCK,

july 1 Amer. Farm. Estab.

IMPROVED DURHAM SHORT HORN BULLS—CHEAP.

I AM requested by a gentleman of high character as an agriculturist, in a neighboring state, to offer for sale several Bulls of his, of which he has yet given me no other description than the following, viz: "My stock is of the Short Horn Durham breed, and derived from the best and purest sources, imported recently." He offers Bulls two years old, one year old, and of the last spring, at the following prices respectively: $200, $150, $100.—If, as I presume from the character of the gentleman, his stock is of a high order, and if he can, as I also presume, furnish pedigrees of pure blood, then is the present a rare opportunity to procure fine Bulls, at more moderate prices than I have hitherto been able to offer them. I will ascertain further particulars in regard to this stock, and be able shortly to speak definitely as to its character. In the mean time, should any gentleman want one or more of these Bulls, he may rely entirely on receiving through this Establishment no other than such as shall be represented and proved too.

Address I. I. HITCHCOCK,

July 15. American Farmer Establishment.

A SUPERIOR JACK FOR SALE.

FOR SALE, by a farmer in this state, a splendid Maltese Jack, *first rate in every respect.* He is *nearly* 14½ hands high!—Eight years old last spring; quick in performance, and *efficient* to an unusal degree. 31 mares out of 34 in one instance, and in another 8 out of 9 mares belonging to one farmer proving with foal by him in 1833. He is probably in every respect one of the best Jacks ever imported into the United States. Price $1000. Address

I. I. HITCHCOCK,

jy 29 Amer. Farmer Establishment.

SEED WHEAT, RYE, &c.

THE subscriber offers his services for the procurement of Seed Wheat, Rye, &c. for those who shall provide funds in Baltimore for that purpose. He does not keep those articles on hand, and therefore can send them to those only who furnish him with the *means in advance.* For all such, however, he will use his best judgment to procure such grain as shall be ordered, charging a small commission for his agency. I. I. HITCHCOCK,

Amer. Farm. Estab.

Note—I. I. H. has made arrangements for procuring for cash, Seed Grain of the very first quality, from some of the best farms in Maryland. aug. 12

A JACKASS.

FOR SALE—A fine Jack, recently imported from Buenos Ayres, by an officer of the Navy, to whom he was presented under circumstances which render it certain that he was there considered a very valuable animal of the best blood and qualities of that country, which is famous for its fine mules. He is of middling size, between 12 and 13 hands high, only five years old, and as handsome *as any other Jackass.* The present owner having no use for him, will be glad to put him where he will be beneficial to the Agricultural interest of the country, and with that view offers to sell him for $500. Application (post paid) must be made to

I. I. HITCHCOCK,

aug. 12 Amer. Far. Estab.

THE COMPLETE FARMER.

JUST PUBLISHED and for sale at this establishment, price $1, "The Complete Farmer and Rural Economist, containing a Compendious epitome of the most important branches of Agriculture, and Rural Economy. By Thomas G Fessenden, Editor of the New England Farmer." "Agriculture is the art of arts: without it man must be a savage, and the world a wilderness."

june 24

NEW LEICESTER BUCKS.

I AM authorised to sell several fine Bucks of the Leicester or improved Bakewell breed of Sheep, and one do of the Cotswold breed, at from $75 to $100 each. Who will have one or more? I. I. HITCHCOCK,

July 15. American Farmer Establishment.

THE FARMER & GARDENER;

AND LIVE-STOCK BREEDER & MANAGER.

CONDUCTED BY I. IRVINE HITCHCOCK, AND ISSUED EVERY TUESDAY FROM THE AMERICAN FARMER ESTABLISHMENT, AT $5 PER ANNUM, IN ADVANCE.

No. 18. BALTIMORE, SEPTEMBER 2, 1834. Vol. I.

☞This publication is the *successor* of the late
AMERICAN FARMER,
(which is discontinued,) and is published at the same office, at five dollars per year, payable in advance.
☞When this is done, 50 cents worth of any kind of seeds on hand will be delivered or sent to the order of the subscriber with his receipt.

American Farmer Establishment.

BALTIMORE: TUESDAY, SEPTEMBER 2, 1834.

CORNSTALK FODDER.—We give on another page of our paper an extract from the N. E. Farmer, on the subject of saving corn fodder; which we recommend to the attention of our readers.

The season is now approaching, when that business will commence; and from the long drought of the season, the crop of grass must be very short, which will give to the corn fodder an unusual value. We had by physiological reasoning on the functions of leaves, and other parts of the plant, come to the same conclusion which is proved by the experiment of Mr. Clark, in the essay alluded to; though we have never before seen the result of direct experiment on the point of the crop of corn being injured by topping in the usual way. The sap of the plant is carried from the root in its appropriate vessels, through the stalk to the leaf, where it is spread out on an extended surface for the purpose of evaporation. The leaves here, perform the same office for the plant which the kidnies do in the animal system, by carrying off the aqueous particles from the blood, and fitting it for assimilation. The sap carrying in solution the gases which compose the substance of the grain, is exposed in the cells of the leaf to the action of light, heat, and electric fluid; and having parted with the surplus watery particles by evaporation, and brought the oxygen, hydrogen and carbon in closer contact, the laws of their cohesive attraction are enabled to operate, and a union of these gases gradually taking place in the proper juices, as they descend from the leaf in their appropriate vessels, until arriving in their descent at the receptacle formed for the grain, where an oxydation of the juices takes place in such a degree as to form mucilage, starch, saccharine matter, &c. which we have already shown may be converted into sugar by the addition of a small proportion of oxygen. It will be seen by this view, that the nutritious particles must be first elaborated in the leaf, and return to the ear before the corn can be formed; and consequently, nourishment to the ear is derived from that portion of the stalk which is above it, and can receive no further aid from the stalk after the operation of topping the corn in the usnal way. The sap which is taken up by the root after the excision close to the ear, is all evaporated at the wound inflicted by the operation, and cannot benefit the grain.

We will advert to this subject again in future, and will probably make it appear, that the portion of stalk below the ear, contains much more nutriment than, the part which by so much labor, is saved in the present mode of curing fodder; and even more nourishment than a crop of clover that the same ground would produce.

GOOD NEWS FOR THE LOWER COUNTIES.

Dr. Ducatel visited our office a few days ago, on his return from his Geological survey of the Eastern Shore and Lower Counties of Maryland. He informs us, that he has discovered marl in great abundance on the banks of rivers in Calvert and Charles counties, and on the Eastern Shore. If this discovery is turned to its proper use by the farmers, who have it in their neighborhood, it will be of much more value to the country than the gold mines of Georgia and other states where that mineral has been found, will ever be. If this marl should turn out to be as beneficial to the soil, as that with which we have been acquainted for the last fifteen years in the state of New Jersey, it will, if properly applied, quadruple the value of their land in five years.

There is great variety in the quality of marl; some abounds with undecomposed shell, so as to require burning, and will be little different in its effects from the hydrate of lime; marl of other kinds is composed of disintegrated shells, which have been decomposed by some acid supplied by the earth, and where this acid is the sulphurous, the marl is essentially the same as plaster of paris.

We have known an experiment with the Jersey marl on potatoes—A piece of ground was selected for the purpose: one portion was planted without manure, another with the usual quantity of stable manure, and a third with marl—It is many years ago, and the quantity yielded is not now recollected, but the size of the potatoes in the different experiments is quite fresh in our recollection. Those without manure were little larger than hickory nuts; those with the manure were tolerably fair potatoes, about the usual size; those produced by the marl were very large, and one being weighed reached the weight of 1 lb. 4 oz.

The best way decidedly, of using this marl is as a top-dressing on clover, and then turning in the sward while the grass roots are still full of sap.

We have known land that would produce nothing but the poorest pasture, after dressing with ten cart loads of marl to the acre, produce the following season, one and an half tons of hay.

Dr. Ducatel has promised us specimens of the different kinds of marl he has discovered, and we have taken measures to obtain some specimens of the Jersey marl beds, that we may by comparison determine their similarity.

MARYLAND HORTICULTURAL SOCIETY,
August 30, 1834.

At a regular meeting of the Council, this day, the following articles were exhibited:—

By Mr. John Hawks, one peck of very fine Onions, from seed this year.

By Dr. J. C. S Monkur, two very fine turnip-rooted Beets.

By Mr. Henry Thompson, four very superior green flesh Cantaloupes.

By Mr. George W. Miller, two pecks of the Newington and red pine Peaches, very fine specimens.

By Dr. J. C. S. Monkur, 6 varieties of foreign Grapes, 2 bunches of each, viz: Sultanna, Black Prince, red, white, and golden Chasselas, Bordeaux Purple, and Orwigsburg.

By Mrs. B. I. Cohen, one basket of Plums, of a very superior quality; name of variety not known.

By Mr. J. B. Morris, two baskets of Pears, viz: the St. Michaels, and grey Beaurre.

By Mrs. Thos. L. Emory, Groombridge's Matchless, Theodore, and a fine seedling scarlet globe anemone flowered Dahlias; Lagerstræmia indica, Eugenia myrtifolia, China Roses, &c.

By Mr. Edward Kurtz, Nerium splendens, do. variegata, do. alba plena, Phlox accuminata, gardenia florida, Lobelia cardinalis, Euphorbia variegata, Plumbago capensis, &c.

A RICH CARGO—The ship Sarah, the first free trader from China, arrived at London in July, with a cargo of raw silk, valued at £400,000, or £1,800,000.

THE FARMER.

Agricultural Chemistry.

Hydrogen.—The next agent in the vegetable economy, which we propose to examine, is Hydrogen.

Like oxygen, its base is never found in a disengaged state; but is combined with caloric, light, and probably with the electric fluid, in the form of gas, called hydrogen gas. It is the lightest species of ponderable matter hitherto known. It was discovered by Mr. Cavendish, in 1766; and can be procured from water, of which it forms an essential part.

To obtain it in a pure state, put some pieces of pure re-distilled zinc, or harpsichord iron wire, into a glass vial, or earthen retort, and pour on them sulphuric acid, diluted with five times its bulk of water;—an efflorescence will ensue, occasioned by the decomposition of the water, and disengagement of hydrogen, which may be collected in the pneumatic apparatus. For very accurate researches, it must be received over mercury in jars, and exposed to the joint action of dry muriate of lime and low temperature. When thus freed from its hygrometric water, its specific gravity is 0.0694 at 60° Fahr. and 30 in. of Barom. pressure.

100 cubic inches of this gas weighs 2.118 grs. It is therefore 14.4 times less dense than common air; 16 times less dense than oxygen, and 14 times less dense than nitrogen. It is with this gas that balloons are inflated, with which the inhabitants of Baltimore have lately become so familiar.

A cubic inch of atmospheric air, Prout found to weigh 30.519 gr. with the thermometer at 60° of Fahr. and the Bar. at 30 in. With these data, it would be an easy matter to calculate the exact ascensive power of a balloon, and thereby prevent such disappointments as our townsman has lately met with near the city of brotherly love.

It is supposed that hydrogen gas, from its being so much lighter than the other constituent parts of the atmosphere, must rise and float uncombined on the upper regions of the air, and when this becomes ignited by the electric fluid on the confines of the stratum, where, in contact with oxygen, it burns, and forms the northern lights, called aurora borealis. The burning meteors, or shooting stars, as they have been called, are this gas ignited in the same way. The singular phenomenon some months ago of the meteoric appearance in the air, was doubtless of this kind.

This gas is colorless, and possesses all the properties of air. When water is passed over iron in in a state of ignition, the oxygen and hydrogen, of which the water is composed, are separated, and the hydrogen set free in the form of gas, without color or smell. It is eminently combustible, and if pure, burns with a yellowish-white flame. When five portions of atmospheric air are mixed with two of hydrogen, and an electric spark passed through, or a taper be applied, explosion takes place—three measures of gas disappear, and moisture is deposited on the sides of the glass.

When two portions of hydrogen are mixed with one of oxygen, and detonated, the whole is condensed into water, which shows us that the composition of that substance consists of one measure of oxygen and two of hydrogen.

The result of experiment has shown that the gas we have been considering, united with the several bases mentioned below, forms the following compounds, viz:

Hydrogen with oxygen, forms		water.
"	Chlorine,	muriatic acid.
"	Iodine,	hydrodic acid.
"	Prusine,	prusic acid.
"	Carbon,	sub. car. & car. hy.
"	Azote,	amonia.
"	Phosphorus,	sub. ph. & ph. hyd.
"	Sulphur,	sul. & sub. sul. hyd.
"	Arsenic,	arsenuretted hyd.
"	Tellurium,	telluretted hyd.
"	Potassium,	potassuretted hyd.

Did it comport with our present object, it would be interesting to follow out with the description of each of these compounds; but as our intention is to show principally their bearing upon agriculture, we shall content ourselves with noticing a few of them.

The hydrogen gas, which has been shown to compose two-thirds of the substance of water, enters also into the composition of all vegetable substances, and forms a considerable portion of the solid mass of wood.

Every one is familiar with the fact, that water can be changed from a solid state, (ice) to a fluid; and by the operation of a further combination of heat, or caloric, it will be converted into steam or air.

This water is composed of two parts of hydrogen gas, as we have seen, and one part of oxygen. When the laws of cohesive attraction between their particles are suffered to operate without interruption from the repelling power of caloric, these two gases enter into union, and form a solid body, called ice. When 32° of heat of Fahr. are imbibby the mass, the particles are repelled, the attraction weakened, and a fluid, or water, is formed. Add 212° of heat, and all continuity of particles is severed, and the mass takes its flight in air. Pass this air over ignited zinc or iron, and the compound will be resolved into its primitive parts, and exist in hydrogen and oxygen. We give this as an instance of the manner in which all material substances are undergoing the perpetual round appointed them by the Great Creator. To ascertain these laws, by which compounds are resolved into their principles, and those simples are again united into new combinations, constitutes the science of chemistry. An agricultural education ought to embrace all the elements and combinations, with the laws of their union in every plant which is intended for cultivation. How can a farmer provide food for his plants. when he knows nothing of what that food consists?

We have shown in our fifteenth number, page 119, that hydrogen enters in a solid state into the formation of gum, resin, olive oil, and into the ligneous fibre of the woods. It likewise enters into animal substances. Animal gelatin, or jelly, is composed of—

Carbon, . . .	47.881,	in 100 parts.
Oxygen, . . .	27.207,	"
Hydrogen, . .	7.914,	"
Azote, . . .	16.998,	"
	100.	

Cream from the milk of the cow, (specific gravity 1.0244) is composed of

Carbon, . . .	59.871,	in 100 parts.
Oxygen, . . .	11.400,	"
Hydrogen, . .	7.428,	"
Azote, . . .	21.381,	"
	100.	

We see that this gas has the power of being concentrated into a solid form, and entering into the composition of most bodies in nature. It forms our food, our medicine, and our deadliest poisons.

Farmers' Museums.

Mr. Editor—I have witnessed with pleasure, by perusing several numbers of your useful paper, that one object of it is to promote *Agricultural Science*, as an aid to practical agriculture. Among other modes of promoting this object is the collection of specimens, both of minerals and plants, for the instruction of farmers. This proposal, I am sure, will secure the vote, and I hope the efforts of every intelligent farmer.

A moment's attention to this subject, will show, that the specimens of nature, which must interest farmers, are very numerous.

As a prominent object of geology is to explain the nature and the variety of soils, geological specimens would of course be particularly useful, as well as interesting to farmers. Numerous minerals are, or may be used as manures, which of course would be useful in a farmers' museum.

In the vegetable kingdom the specimens connected with agriculture are still more numerous than those of minerals. Not merely the plants cultivated, but those which obstruct cultivation, might be studied to advantage by every practical farmer. Respecting the character, the modes of cultivation, and the profits of the different grasses, knowledge might be diffused with the greatest ease, and much to the advantage of agriculture. Forest trees and fruit trees might be better understood than they are at present by the most intelligent farmers. And, whenever a plant is to be studied or cultivated, the first step necessary is to have a specimen furnished.

Some portions of the animal kingdom are of course objects of the farmers' care, while others are to be avoided or destroyed. Various insect tribes are among the most powerful and constant enemies the farmer has to encounter. If specimens of these could be seen, and their history and habits learnt by those whom they annoy, their ravages might in many instances be prevented.

Not only the three great kingdoms of nature, but the works of art, might enrich a farmers' museum. Specimens, or representations of parts and plans of buildings, agricultural implements, and various manufactured salts useful as manures, would be in place in such a collection.

So evident, and so great, are the advantages which every farmer must receive from examining and studying the substances and the principles connected with his profession, that the great question is, not whether they would be useful, but whether they can be procured. To the last question, no less than the first, the answer is in the affirmative. They can be procured, and with great ease by every farmer, who will attend an education convention at his county town on the 5th of November next, and take with him any specimen he may think useful, whether he knows its name and properties or not. No matter whether it is a seed or a plant which he supposes might be cultivated to advantage, a specimen of marl or peat, or any thing else capable of promoting vegetation, or some insect or weed, which has thwarted or opposed his efforts. If he knows it, he can tell it to others; if he does not, some other person present may probably inform him what it is.

I hope, Mr. Editor, that farmers in particular will attend the conventions which I have seen proposed and recommended by numerous papers in various parts of the country, in each of the eleven hundred counties in the union, on the first Wednesday of November next, for organizing County Lyceums, commencing Museums or Cabinets of Nature and Art, for promoting manual labor and circuit schools, and advancing the general purposes of education and useful knowledge.

Some perhaps may be encouraged to be present and act at the proposed conventions, by the measures in progress to promote them, by the Baltimore Union Lyceum. I am informed that this Society, at a late meeting, *Resolved* unanimously, that, in in their opinion, the general organization of county Lyceums, in all the counties in the states, would be eminently calculated for the advancement of American education; that they would prepare as soon as practicable, specimens of plants, minerals, penmanship, drawing and needlework, for all county Lyceums in the Union, which might apply for the same, and that the juvenile department of the Lyceum, be invited to co-operate with the Society in accomplishing the object of the resolution.

In the spirit of this resolution, the juvenile Lyceum, have already collected several thousand specimens of minerals, and many of plants, for the object proposed. And by what they have done in two or three weeks, they afford convincing evidence, that by November, they may have sets of specimens ready, for as many county Lyceums, or county conventions, as shall apply for them: especially as Baltimore and vicinity afford a greater variety and better specimens of minerals than any other district of country in the union, and in sufficient abundance to supply a Lyceum in every county, village, school and family in America, and still retain enough for Europe and Asia.

Objects and measures, Mr. Editor, of so much importance, and so entirely feasible, I know will be forwarded by your best efforts, and I hope they will by every quarterly, monthly, weekly and daily journal in the country. Agricola.

[From the N. E. Farmer.]

CUTTING CORN STALKS.

Mr. Fessenden—I have made a small experiment the past season, to ascertain the damage, if any, that results to the corn crop, from topping the stalks in the usual way. And, influenced by the request of several individuals, and the thought that, perhaps, it might *lead* to a better knowledge of this important branch of agriculture, (the growing of corn,) I am induced to forward the particulars to you for publication. Although I am aware that *guessing* enters largely, and perhaps necessarily, into the calculations and business of the farmer, I am also aware that experiment cannot be conducted with too much precision; indeed, that experiment to be relied on, must be conducted entirely without guessing. Therefore, I have been somewhat particular in conducting this. And lest some of your readers may be a little sceptical in regard to the result, and perhaps unwilling to allow that the course which has been pursued by our ancestors, from time immemorial, is not the best course, I will give the details; and if an apology be deemed necessary, for being so very minute, I can merely say, that as the experiment seems to me so deeply to involve the interests of corn growers, it may be well to give a detailed statement of the case, so that any interested may be able to draw their own inferences. And if, in your opinion, it is worthy a place in your useful Journal, or likely to promote the interest of New-England farmers, you are at liberty to publish all, or a part, as you think best.

For a few years past, I have not cut my corn stalks until the corn was harvested, *guessing* that it was a course preferable to the one commonly pursued in this part of the country, of topping the stalks while in a green state. But for the purpose of settling this point more clearly, and with as little trouble as the case would admit, I selected, about the 5th of September, a row of corn in a field of about five acres, intending to take one that would average in quality equal to the field throughout, that I might at the same time be able to ascertain with tolerable certainty, the product of the whole field. The manure having been spread on the surface of the ground and harrowed in lengthwise of the furrows, and the corn planted across the furrows, made it apparently less difficult to select an average row. On this row I cut the stalks from half the hills; beginning at one end and cutting the first hill, then leaving the next uncut, and so proceeding alternately, cutting one and leaving the next uncut, through the row. I had intended to confine the experiment to this row, but finally was led to extend it so far as to include four rows, and numbering them agreeably to the order in which they were standing in the field, this row may be called No. 2. There were ninety-two hills in the row, and the stalks were cut from forty-six hills, all of them in the manner that is here termed jointing, (i. e.) cut off between the ear and the first joint above the ear. I thought they were somewhat more ripe, than is usual at the time of cutting; a few of them were nearly dry. The soil was a sandy or gravelly loam, anciently covered with pine, oak and chesnut. In hoeing the corn no hills were made, but some care was taken that the surface of the ground should remain as level as possible, through the season.

My estimate of the number of hills on an acre, was made in the following manner, and if I am wrong in my calculations, I shall be corrected by some of your readers:

In an area of 200 feet square, (or 40,000 square feet,) there were sixty-two rows, with fifty-four hills in a row, making 3,348 hills. This is equal to 3,646 hills per acre, each hill occupying nearly 12 square feet of surface. There were about four stalks of corn in a hill. In estimating bushels, I have allowed the lawful weight of fifty-six pounds to the bushel.

At the time of harvesting, the corn was husked in the field. The forty-six hills from which the stalks had been cut, gave forty-eight and a half pounds of ears; and the forty-six hills on which the stalk had not been cut, gave sixty-two pounds of ears. The number of ears in the two cases was about the same; those from the uncut hills, were evidently the best filled out and the most hale; on a large proportion of them the kernals were so closely wedged in, as to make it difficult to bend the ear at all without breaking it. There was very little mouldy corn in either case, a few ears were gathered, mostly from the cut stalks, but the whole quantity was so small as to make it questionable whether cutting the stalks had much effect in this particular.

Both parcels were carefully laid aside in a dry chamber for about six or eight weeks, at the expiration of which time they were again weighed, and the parcel of ears from the uncut hills had lost in drying about two per cent. more than the other; affording some evidence that the sap continued to circulate for a greater length of time, in the uncut than in the cut stalks. The uncut hills, gave 42 lbs. 8 oz. dry shelled corn, equal to 14 oz. 12½ grs. per hill, or 60 bushels and 8 pounds per acre. The parcel from the cut hills gave 33 lbs. 7 oz. equal to 11 oz. 10 grs. per hill, or 47 bushels and 18 pounds per acre; making a loss of 12 bushels and 46 pounds per acre, by cutting the stalks. Conclusive evidence, that while the sap is in circulation, nature does not assign the stalks an unprofitable office. The pro-

duct of the whole row, taken together, cut and uncut hills, was equal to 53 bushels and 41 pounds per acre.

The product of row No. 3, taken by itself, (containing ninety-two hills, on one half of which the stalks were cut on the same day the others were,) would not show the practice of cutting stalks quite so destructive in its effects, as that exhibited in row No. 2, its whole produce was 77 lbs. 9 oz. dry corn, equal to 55 bushels and 10 pounds per acre, or 1 bushel and and 25 pounds per acre more than row No. 2.

Not satisfied with resting the experiment here, I gathered the corn on rows Nos. 1 and 4, (i. e.) the rows each side, next adjoining No. 2 and 3, and on which none of the stalks had been cut. These rows, taken together, contained 186 hills, and their product of dry shelled corn was 171 lbs. 13 oz. equal to 14 oz. 12½ grains per hill, or 60 bushels and 8 pounds per acre, precisely the same average yield as that part of row No. 2, on which the stalks had not been cut; this *exact* coincidence, however, I think may be numbered among those cases which rarely happen.

The difference between the two rows on which half the stalks were cut, and the two rows on which none of the stalks were cut, was 5 bushels 38½ pounds per acre. If this difference arose from cutting half the stalks, (and I know of no other reason,) then cutting the whole, would have reduced the crop 11 bushels and 21 pounds per acre, or from 60 bushels and 8 pounds to 48 bushels and 43 pounds per acre.

To recapitulate row No. 2, on which the experiment was commenced, taken by itself, as follows, viz: 46 hills on which the stalks had *not* been cut, gave 42 lbs. 8 oz. dry shelled corn, equal to, per acre, 60 bush. 8 lbs.

46 hills from which the stalks *had* been cut, gave 43 lbs. 7 oz. dry shelled corn, equal to, per acre, 47 " 18 "

Loss by cutting the stalks, per acre, 12 bush. 46 lbs.

The four rows taken together, stands as follows: Nos. 1 and 4, on which no stalks were cut, gave an average of, per acre, 60 bu. 8 lbs.

No. 2 and 3, from which half the stalks were cut, gave an average of, per acre, 54 " 25½ "

Loss by cutting ½ the stalks per acre. 5 bu. 38½ lbs. 2

On cutting all the stalks, would make a loss equal to, per acre 11 bu. 21 lbs.

The difference in the result of the two cases, is 1 bushel and 25 pounds per acre; or, in the two experiments, (if it may be so termed,) there is an average loss by cutting the stalks, of 12 bushels 5½ pounds per acre; a loss quite equal to all the expense of hoeing and harvesting, especially when we consider that in hoeing, the labor of making hills was dispensed with.

If I had cut all the stalks, and obtained a crop of forty-eight bushels to the acre, the very fact of having forty-eight bushels, would, I think, be considered by farmers generally, in this section of the country, as proof positive that the stalks were cut without injury to the crop. Or if I had gone one step farther and made large hills, at an additional expense of one dollar per acre, and thereby reduced the crop to forty-five bushels per acre, the forty-five bushels would be considered sufficient proof, that making hills (which, by the way, are usually made equally large and high on wet or dry land, without regard to soil or situation,) was labor well laid out. For although you occasionally give us a *large corn story*, swollen a little, perhaps, by *guessing* it off in *baskets;* yet, judging from what we see and know about raising corn, we call forty-five bushels, per acre a good crop.

A measured bushel, from the cut hills, weighed 57 lbs. 6 oz.—one pound less than from the *uncut;* the shrinkage being very near equal to the whole loss in weight.

If this experiment is a fair test, it seems *that about twenty per cent, or one-fifth part of the crop is destroyed, by cutting the stalks in the way they are usually cut.* If further experiment should establish this fact, I think there are few farmers that will hesitate long in deciding which is the most valuable, one acre of corn or five acres of top stalks. But this twenty per cent. is not saved at the expense of losing the stalks, they are worth as much, and I think more, all things considered, after the corn is harvested, than they are, gathered in the usual way. If after being bunched up in a green state, they heat or become mouldy, (a case of frequent occurrence,) they are utterly worthless, except it be for manure; I know of no animal that will eat them. But after they have once been dried by the frost and wind, a subsequent moderate degree of mouldiness, seems to be no injury.

The course which I have pursued with them, and for the present I know of no better, has been as follows: In the first place, they are cut off near the ground, and for this purpose a short scythe is found the most convenient instrument. The expense of cutting in this manner, however, is but a mere trifle, if any, more than cutting the stub stalks in the spring, and may with propriety be entered as an item of expense against the next crop, for which it is preparing the ground. After cutting, they are gathered into bunches of suitable size for binding, and three good sheaves of rye straw, if wet, will be sufficient to bind a ton. In gathering them up and laying in bunches, an active boy will do as much as a man. In this way, the whole expense of gathering, binding and loading, will not exceed 75 cents per ton. As they are very bulky, for want of barn-room, I have them stacked near the barn-yard; and I think I may safely say, that my cattle eat more pounds of stalks from an acre gathered in this way, than they would from the same acre, if gathered in the usual way. It may be objected to this, that they are not as good and nourishing as others; as to that matter, I am not able to say; but if the cattle are good judges in the case, (and I think they ought to be admitted as such,) they are quite as good and quite as nourishing, for they are eaten, apparently, with quite as good a relish. In addition to this, they are obtained without breaking off ears or breaking down hills in hauling out, occurrences quite frequent in the other case. They also furnish more than double the quantity of bedding for the yard, an item of no small moment in the list of "creature comforts," during our cold winters. And last, though not least, they make more than double the quantity of manure, the value of which will be duly appreciated by every good farmer, without argument. It may be said that the butt stalks can be gathered after harvest, and furnish the same quantity of litter and manure as in this case; that is true; but the expense of gathering both parts in that way, from the butts being so short and inconvenient to bind, would be three times as much as it is to gather them whole. Thus viewing the subject in various points, I think this method of managing corn stalks is much better than the old one; and that a little observation and experience will convince the most sceptical, that this branch of agriculture is not yet brought to a state of perfection; that there is yet room for improvement.

In passing through a field of corn, about the first of September, I noticed that my clothes contracted a strong smell of smut, and not being aware that I had come in contact with any smutty ears, I was led to examine a little to ascertain the cause. I found many of the corn leaves nearly covered with rust (something similar to that observed on the stalks of English grain, preceding a blight,) and intermingled with the rust, was an abundance of very minute blisters of smut, or something which had the appearance and smell of smut. As I had never observed any thing of the kind before, and smut is said to be injurious to cattle, I have thought that something of this nature might have occasioned the difference of opinion, entertained by some of your correspondents, last fall, in regard to the utility of feeding milch cows with green corn stalks. Feeding cows with smutty stalks, even if "fed to the full," would probably tend to dry them up; while feeding them plentifully with healthy stalks in a green state, would undoubtedly increase their milk.

In conclusion, I would enquire, if you can (through the columns of the Farmer,) give us the detail or result of any experiment made to ascertain the damage sustained by pasturing or feeding English grain on mowing land. I think this an important subject of inquiry to every New-England farmer, and submit it for the purpose of obtaining information. That good crops are sometimes gathered after feeding, is well known; but facts are wanted, which will fairly exhibit the effect of feeding those lands. Although this practice is handed down to us with the claims of ancient usage for its support, and perhaps might have been expedient in former days, yet, from some years' observation, I have little doubt that accurate experiment, particularly with English grain and young clover, will prove it to be a species of farming similar to that of topping corn stalks, and equally disastrous in its effects.

WM. CLARK, Jr.

Northampton, March, 1832.

The ladies of New-Haven, it is said, have pledged themselves over a cup of tea, neither to walk, talk, dance or marry, with any man who either smokes or chews tobacco.—*N. Y. Transpt.*

THE BREEDER & MANAGER.

[From the Farmers' Series.]

THE SHORT-HORNS.—Mr. Arrowsmith (of Ferryhill) who fed off his short-horns at two years old, furnished the following particulars of the prices he obtained from the butchers, viz:

In 1801, sold four for £25 each; two steers, and two heifers.

In 1802, six for £17 10*s.* each; three steers, and three heifers.

In 1803, four for £17 each.

In 1804, six for £18 10*s.* each.

In 1805, six for £17 10*s.* each; two steers and four heifers.

In 1806, four for £16 each.

In 1807, eight for £18 each.

In 1808, eight for £19 each.

The time of selling, from the beginning to the latter end of May. Management.—In the first winter they got straw in a fold-yard, with nearly as many turnips as they could consume; in May they went to grass; in November put to turnips through the winter, and turned to grass the first week in May.

A twin heifer, belonging to Mr. Arrowsmith, calved the last week in April, being kept the first year as the store-stock, was entered for a sweepstakes, to be shown in June, at which time she would be two years old. She was immediately turned to grass in the usual pasture. In November she was estimated to weigh 28 stones; when she was put to the ruta baga, and hay, and oil-cake, of which she ate 4 cwt., with 2 bush. beanmeal, and 1 bush. barley. She went to grass again on the first of May, and from that period had neither cake or corn. On the 23d of July, it was the unanimous opinion of the best judges that she weighed 58 or 60 stones; having gained 30 stones in 30 weeks.

In April, 1808, Mr. Bailey saw, at Mr. Arrowsmith's, eight yearlings, intended for the course of feeding described as adopted by that gentleman; whose sales, from 1801 to 1808 inclusive, have been already particularized. They were *very lean*, not more than 15 stones each; and had they been offered for sale in a fair, no person, unacquainted with the breed, would have given more for them than £4 10*s.* or £5 per head.

Mr. Walton (of Middleton in Teesdale) had been, in 1808, in the habit of selling his steers, at two years and a quarter old, at from £20 to £30 each; their weight being 50 to 54 stones, fed solely on vegetable food. He often, for the sake of experiment, bought in calves of the improved, or old breed of the county, and he uniformly found that his own at two years old got fatter, and fitter for the butcher, than the others did at three, although fed and kept exactly alike.

Mr. Mason (of Chilton) in the course of an experiment to ascertain the weight of beef gained by the food given (turnips) found three steers, under three years old, to have gained 20 stones each in 20 weeks. The three steers averaged 70 stones each.

In 1816, Mr. Nesham's steer, three years and a half old, obtained the premium offered by the Durham Agricultural Society; his weight was, 4 quarters, 96 stones, 1½ lb.; tallow 11 stones, 7 lb.; hide, 8 stones.

Major Rudd (of Marton in Cleveland) obtained the premium offered by the Cleveland Agricultural Society in 1811, for the best steer, under three years old, and fed on vegetable food. The steer was sold to the butcher for 10*s.* per stone, and slaughtered when three years and thirteen days old; the weight of his four quarters was 96 stones.

The late Mr. Robertson (of Ladykirk, near Berwick-upon-Tweed) furnished the writer with the following particulars of short-horns, bred by him, and fed, with few exceptions, on vegetable food.

1794, an ox, four years ten months old; four quarters, 145 stones 3 lbs.; tallow, 24 stones 7 lb.

A steer, under four years old; four quarters, 106 stones; tallow, 19 stones 7 lb.

1814, a steer, three years nine months old; four quarters, 101 stones; tallow 15 stones.

1815, a steer, three years eleven months old; four quarters, 112 stones 7 lb.; tallow, 26 stones.

A heifer, three years eight months old; four quarters, 89 stones.

1817, a steer, three years two months old; four quarters, 95 stones 10 lb.; tallow, 17 stones 10 lb.

1822, an ox, four years and a half old; four quarters, 135 stones; tallow, 21 stones.

Own brother to the foregoing, three years and a half old; four quarters, 133 stones; tallow 21 stones.

A steer, three years ten months old; four quarters, 124 stones; tallow, 17 stones.

A steer, three years eight months old; four quarters, 112 stones; tallow not weighed.

A steer, bred by Col. Cooke (of Ouston, near Doncaster) fed on potatoes and straw, was slaughtered when two years and twenty-two days old; his four quarters weighed 72 stones.

Mr. John Renmie (of Phantassie) produced, at the East Lothian Agricultural Society's meeting, in November, 1823, a steer, from eighteen to twenty months old; the four quarters of which weighed 118 stones 1 lb. Smithfield weight.

The same gentleman produced before the Highland Society of Scotland a steer, aged two years four months, whose four quarters weighed 153 stones 7 lb; also a steer, aged three years six months, whose four quarters weighed 169 stones 7 lb.; tallow, 30 stones 1 lb.

Except in the three last instances, all the weights given have been by the stone of 14 lb.*

Should the foregoing statement be considered to have been unreasonably extended, it is presumed it will, at least, be admitted, that its ample detail, if attended to, will establish the credit of the short-horns as an invaluable breed to the grazier.

In the commencement of this account, however, it was stated that they possess a combination of qualities, hitherto considered incompatible. It will be obvious that the disposition to feed rapidly, in union with dairy qualifications, is here intended.

It might have the appearance of an intention to depreciate other breeds of cattle, were an enquiry instituted how the very general impression came to be entertained that animals disposed to fatten rapidly seldom give much milk. It is unquestionably true, that every perfection in cattle—whether it be one of form, of quality of flesh, of disposition to fatten, or to yield milk—can be promoted and retained solely by the breeder's devoted attention to his particular object; and if one object be allowed a paramount importance in the breeder's estimation and practice, other objects will suffer, in proportion as they are neglected.

The improvement in the carcase of the short-horns has been so surprising, and so justly valued, that many persons have allowed that completely to occupy their attention, and the dairy has been disregarded. In such a state of things, every advance towards one point has been tantamount to receding from another; because the same proceeding which tends to enhance a particular quality, will also enhance a defect, provided such defect was of previous existence.

This may be rendered more intelligible by a short illustration:—Suppose half a dozen animals to be selected in consequence of their possessing a particular quality; which quality it is proposed, on a certain established principle of breeding, to increase and render almost permanent by their union. Suppose the animals so selected to come from the hands of breeders who have neglected the milking property; the certain consequence will be, that the very union which developes and secures the desired object will tend, on the same principle, to increase the defect as to milk. In short, it will render it *habitual* in the produce. But this illustration, by a *selection*, is supposing too much for the probable state of the case. The objections which exist among breeders, for various and some cogent reasons, against crossing with the stocks of each other, unavoidably lead to the practice of breeding in and in; which, in case of any original deficiency of the milking property, must unquestionably go on to render that deficiency greater. It is hence evident that bad milking, in a breed of animals which were ever distinguished as good milkers, is not a necessary consequence of improvement in the animal in other respects, but a consequence of the *manner* in which such improvement is pursued. This the writer considers to be the reasoning properly applicable to the subject; which happily also admits of a satisfactory appeal to facts; and he is strictly justified in asserting that improved short-horns, inferior to none for the grazier, may always be selected and bred with the most valuable dairy properties. Perhaps a more plentiful and steady milker than the dam of Mr. Berry's bull, never stood over a pail, and few such carcases of beef have been exhibited as hers, when an accident rendered it requisite to only half feed her. The bull himself has an extraordinary disposition to carry flesh, and his calves are let down in the udders like miniature cows. In fact, all the bull's family are excellent for the pail, and the quickest possible feeders. The writer has known

* That extraordinary animal, which was lately exhibited under the name of the "Lincolnshire Ox," although fed in that county by Lord Yarborough, was a pure short, both on the side of the sire and the dam. He measured five feet six inches in height at the shoulders, eleven feet ten inches from the nose to the setting on of the tail, eleven feet one inch in girth, and three feet three inches across the hips, shoulders, and middle of the back. His breast was only fourteen inches from the ground, and he stood one foot ten inches between the fore legs.—*Edit.*

many instances of the highest bred short-horns giving upwards of four gallons (wine measure) of milk night and morning; and it is certain that attention only is requisite, on the part of the breeder, to perpetuate this quality in any desirable extent. While on this subject, it is proper to observe, that the excessive quantities of milk obtained from the unimproved short-horns are seldom or ever obtained from the improved; but a moderately good milker of the latter kind will be found to yield as much *butter* in the week as one of the former: the milk being unquestionably of very superior quality; and, indeed, it was likely such should be the case, and that the artificial change in the animal economy, which leads to an excessive secretion of flesh and fat, should also be productive of other rich secretions. Within the last three or four years, affidavits were sworn before a magistrate in America that an improved short-horned cow imported thither, produced after the rate of 20 lb. of butter per week.

[From the London Lancet.]

LECTURES ON VETERINARY MEDICINE,

Delivered in the University of London, by Mr. Youatt.—LECTURE IV.

THE NOSTRILS AND THE SCHNEIDERIAN MEMBRANE.

The Nostrils.—The nasal cavity on either side gradually diminishes anteriorly, and at length terminates in an irregular ovoid orifice on either side. The triangular spaces between the nasal and anterior maxillary bones are filled up by elastic cellular substance and integument, and which are supported by these bones, and by two cartilages on each side. The face gradually diminishes towards the lower part. The broad muzzle of the ox would be an unsightly termination of the face of the horse; in consequence of this the external nostrils are correspondingly small, and they seem barely large enough for the purpose of quiet and undisturbed breathing. But we often exact from the horse a great and cruel exertion of speed, accompanied by a corresponding expenditure of animal power, and this demanding an equivalent supply of arterial blood, and that to be obtained only by a proportional admission of air into the lungs.

The apparently contracted nostril of the horse would not admit of sufficient air to arterialise the blood, and support the rapidly-exhausted contractillity of the over-worked muscular fibre, were there not a beautiful apparatus of soft distensible parts, and cartilage and muscle occasionally to expand the nostril, and admit the increased quantity of air which the animal may demand. Attached to the soft parts composing the nostril are several powerful muscles, which serve to expand these orifices, and there are two cartilages on each side, which, while they admit of the expansion of the nostrils, restore them again to their natural dimensions by their inherent elasticity. The cartilages are attached to and supported by the points of the nasal bones. There are two larger ones superiorly, and two smaller and lunated ones below. They give form to the nostril in the natural state of breathing, and likewise in the act of increased respiration, and, the muscular power which dilated them ceasing to act, they bring the nostrils back to their original dimension and form.

The Muscles of the Nostrils.—The principal muscles concerned in expanding the nostrils are the *transversales* (*dilatatores nasi anteriores*) that can scarcely be said to have any proper origin, for they are bound down on the point of the nose, and are inserted into each of the cartilages. When they act they draw these cartilages towards the centre of the nose, and so expand the nostrils in that direction. These muscles are not found in the hog, to whom they could be of very little use. Then there is the *dilatator lateralis*, proceeding from the point of the ridge of the superior maxillary, and inserted on the outer side of the nostril. This muscle will draw the side of the nose outwards and backwards, and so dilate the nostrils outwardly. Both these muscles acting together, and dilating the nostril both outwardly and inwardly, will very considerably enlarge the external orifice. The dilatator lateralis is an exceedingly powerful muscle in the hog, to give flexibility to his nasal spade. The absence of the former, which could scarcely be useful to this animal, and the extraordinary size and strength of the other, are pleasing illustrations of the adaptation of animals to their situation and destiny. Another muscle, the *nasalis longus*, comes from the union of the superior maxillary and malar bones, and is partly inserted into the false nostrils and dilate them.

The False Nostrils.—These are singular contrivances. They are duplicatures of the skin, but thinner and more flexible; they are blind pouches or bags which fill up the lower side of the nostril. Their use has never been satisfactorily explained. In some measure they give additional expansion to the nostril, but when examined more closely, they serve, and particularly in laborious breathing and when the current of air would be exceedingly strong, to divert it from the superior meatus, the peculiar seat of smell, and the most sensitive part of the nostril, and where its violence might be injurious, and to direct it into the lower meatus, whence it will more readily find its way to the trachea and lungs.

Another muscle by which the nostrils, both true and false, are expanded, is the *levator labii superioris alæque nasi*, from the superior portion of the nasals, and even from the frontal bones to the upper lip, and to the skin of the nose, and the false nostrils. This muscle is not found in the hog, for in the construction of his muzzle it would be powerless. The *nasalis brevis* is a triangularly-shaped muscle, occupying the unattached sides of the nasal bone, and of the opposite and corresponding border of the anterior maxillary, and connected with the whole of the interposed substance of the soft nostril; evidently tightening the substance, and so somewhat enlarging the orifice of the nostril, but more employed in supporting it, and preventing it being too much dilated. This is a muscle of little development and power in the *sheep* and *hog*, and not found in the *dog*.

All these muscles are employed in dilating the nostrils, and, in rapid progression, they have as much as they can do to dilate them sufficiently. Where are the antagonists? we find them only, and we find them of sufficient power, in the elasticity of the soft nostril generally, and more especially in that of the cartilages.

The difference of the Nostrils in different breeds of Horses.—All these parts are more developed, the cartilages are larger, and the integument is thinner, and more flexible, and the muscles are more powerful in proportion as the horse is formed for speed. There is not a more marked characteristic of the blood-horse than an expanded nostril. There is scarcely a more interesting object than his dilated nostril when he is sufficiently excited but not overblown; on the contrary, there is nothing so painful to observe as the spasmodic dilatation of the nostril, and the painful working of every muscle when the horse of no blood is pushed beyond his natural power. If you have ever contemplated the sudden lighting up of the countenance of the hunter, when his ears become erect, and his nostrils dilate as he first hears the cry of the hounds, and snorts and scents them afar off, you will be aware of the beauty and the use of an expanded nostril. Take the first opportunity of comparing together the confined nostril and thick skin, and quantity of cellular substance about the muzzle of the cart-horse with the far wider and more flexible one of the blood-horse.

The inhabitants of some countries were accustomed to slit the nostrils of their horses that they might be less distressed in the severe and continued exertion of their speed. The Icelanders do so at the present day: but there is no necessity for this, for nature has made ample provision for all the ordinary and even extraordinary exertion we can rationally require from the horse according to his breed and character.

The muzzle of the ox, not designed for speed and incapable of the continued exertion of it, offers a singular contrast, especially connected with the different function of the upper lip in that animal, viz: firmly to hold the food until it is torn off, not perfectly cut, by the pressure of the lower incissors against the pad which supplies the place of teeth in the upper jaw. In the sheep and swine no provision is made for speed, but as I have already observed, it is secured in the dog, by the expanded and circular aperture of the nostril.

The cavity of the nose is lined throughout by a soft thick membrane, extending from the common integument through its whole extent.

THE GARDENER.

PENNSYLVANIA HORTICULTURAL SOCIETY.

At the meetings of the Pennsylvania Horticultural Society, in July and August,—

Mr. Chalmers presented specimens of the White Bonnevil Cucumber, the produce of seeds obtained from the London Horticultural Society. It is a large white, smooth variety, used for stewing.

Messrs. Dryburgh and Sherwood, the Stapelia grandiflora, and a fine white seedling Phlox.

Mr. Allen—a gigantic specimen of the Amaranthus cruentus.

Col. Carr—two Dahlias, Barret's Queen Adelaide and the General Pike, the latter a seedling.

Mr. McAvoy—some fine large Purple Figs.

Mr. Charles Kenworthy—a Cucumber of the Prizefighter variety, 18 inches long, and weighing $1\frac{3}{4}$ pounds, produced from a cutting.

Mr. John Evans—leaves of the morus multicaulis, ten inches by seven; and the Bingham Plum,

which has remained entirely free from the attacks of insects.

Mr. Parker—apricots; the Louis le Grand Pear; a seedling Peach, a large Yellow Cling; the double variety of Saponaria officinalis; six varieties of Phlox, two of them seedlings; and flowering branches of the Lagerstrœmea, Champney and Franklin Tea Roses.

Mr. Buist—the following Dahlias; Lord Liverpool, Countess of Liverpool, Scarlet Anemonaflora, Nymphœiflora, Red Globe, King of the Whites, Russel's maculate, La Excellente Rose, Blush Lilac and Countess of Shannon; The Grandville Rose; R. noisettia superba; and *R. nivea*, a shoot of which, a foot in length, contained 121 buds, and 29 full-blown, snow white, and agreeably scented flowers. The *Fuchsia globosa*, entirely new, which takes its name from the globular buds, being like half-ripe Cherries, and is a beautiful and profuse flowering species.

MISCELLANEOUS.

INTERNAL IMPROVEMENT.

Great Rail Road from New York to Washington, through Philadelphia and Baltimore.

The continuous line of rail road which is intended to run interruptedly from New York to Washington, through Philadelphia and Baltimore, is undoubtedly one of the most magnificent works of the present day, either in this country or in Europe.—In point of extent it far surpasses any line yet possessing the slightest prospect of completion in the United States. We hear indeed of lines of rail road projected in New York and elsewhere, but they are projects on paper, and will long remain there.

This series of rail roads from New York to Washington, under different charters, granted by different States, which combined into one continuous line, uniting the two large and all the intermediate cities in question, could be completed, *but for one obstacle*, in probably one year or eighteen months. This obstacle is the small section of twenty-six miles between Trenton and New Brunswick, in New Jersey; a section which is indeed under the operation of a charter for one of the old fashioned turnpike companies, but does not *at present* possess those powers of transportation and management which are necessary to transform it into a rail road.

We have procured from the best sources of information a full and accurate statement of the present conditon and prospect of the whole series of these rail roads, which, combined, will bring New York and Washington within *eight hours* distance of each other, and of course all the intermediate cities in a like proportion. This information is so interesting that we cannot deny ourself the pleasure of communicating it to the public.

And *First.* The rail road from Washington to Baltimore. The length of this section is 37 miles, being a branch of what is called the Baltimore and Ohio Rail Road, chartered under the joint powers of Congress, and of the state of Maryland. This road is now in the process of construction. A large section is finished, and it is believed that it could all be completed in less than a year.

Second. From Baltimore to Port Deposit Bridge on the Susquehanna. This section is also chartered by the state of Maryland—the stock subscribed—the route surveyed and located, and could be put under contract and finished with great expedition. This road is nearly straight and very level—the only exception being a very small sweep up to Port Deposit Bridge. Length of this section, 41¼ miles.

Third. From Port Deposit bridge to the Maryland and Pennsylvania line—distance 10 miles—This section is also chartered, the stock subscribed, route surveyed and located, and only waits the action of the New Jersey legislature upon the Trenton and New Brunswick section.

Fourth. From the Maryland and Pennsylvania line to the Columbia rail-road, near Coatesville, distance 20¼ miles. This section is also chartered, surveyed and located, being in the same situation as the two preceding sections. From Coatesville to the Susquehanna the ground is particularly well adapted for a rail-road. The line laid out runs along a gentle ridge almost level the whole distance till it descends the bank of the Susquehanna. The ground resembles the famous *ridge road* of western New-York.

Fifth. From Coatesville on the Columbia rail-road to Broad street, Philadelphia, distance 45½ miles. This is now in use. Not a word need be said of this section to a Philadelphia reader. It is crowded daily with passengers.

Sixth. From Broad street through the Northern Liberties, &c. to the Delaware river, distance one mile. Nothing need be said of this short cut.

Seventh. From Philadelphia to Trenton bridge, distance 26¾. This section we have already described. It is nearly completed, and will be ready for the locomotive before the termination of the season.

Eighth. From Trenton bridge to New Brunswick, distance 26½ miles. *This is the only section throughout the whole line from Washington to New York that is not chartered for a rail road.* It is in the condition of this section in which exists the whole obstacle to the completion of a line of rail-road that would confer lasting benefits on the whole Atlantic seacoast—but of this more anon.

Ninth. From New Brunswick to Jersey city opposite New York, distance 30¼ miles. This section will be completed and ready for trade next year—more than half will be ready this season.

Thus at one view we have a continuous line of rail-road through the whole route from New York to Washington, a distance of 239½ miles, including the breadth of the North River, that could be constructed and made ready for locomotive travelling in about a year from this date, provided the legislature of New Jersey would remove the only obstacle that stands in the way of such a magnificent improvement.

The advantages that would follow the opening of such a rail-road can scarcely be realized at this day. We are but in the infancy of steam-power, as applicable to rail-roads. From the experience already had, it is obvious that in time it will supersede all other modes of transportation, except in bulky commodities. Men, women, children, all valuable articles of merchandise—the public mails, books, journals, &c.—perishable fruits and provisions, will all be transported by locomotive power over rail-roads. The rapidity of such a mode can, with equal safety, be made twice or thrice the faster than the fastest steamboats; and as to canals, they are left out of sight altogether. Cities will be brought within speaking distance of each other, and towns will spring up in the wilderness.

But enough at present—a particular enumeration of the advantages of the road in question we shall reserve for another day.—*Penn. Inquirer.*

Use of Tomato, *in quickening the action of the abdominal viscera.*—Like most persons of studious or sedentary habits, I often am more or less incommoded, and my health impaired, by inaction of the stomach and bowels, so as to be under the necessity of resorting to medicine, principally cathartics. In order to enable our readers perfectly to appreciate what I am about to say of a remedy, this state of the bowels is always in some degree accompanied with a sense of straitness of the chest, and besides a general uneasiness, and lassitude, with the head ache, or some degree of pain in the region of the liver. It seems to me a recurrence of those symptoms that accompany attacks of what is called by the physicians, a liver complaint, to which I have been a good deal subject. The appetite instead of being keen becomes imperfect, with a paculiar taste of the mouth, as if something was wanting in the functions of digestion, to constitute health, for which cathartics are only a temporary relief, not a remedy.

The common Tomato, used in making gravy, at once removes this taste of the mouth, in a little time quickens the action of the liver, and removes all the above noticed symtoms and feeling; I regard it as an invaluable article of diet, or, if you please, as of medicine, or of medical diatetics.—With me it has always been an object of solicitude, to find out such diet, as should supercede the necessity of medicine. Except in pickle, which I cannot use, I eat the Tomato, in every mode of dressing, and find it perfectly adapted to my wants. In the hope of being of some use to others, these facts are stated.—*N. Y. Farmer.*

Needles.—A great improvement has recently been made in the manufacture of those important articles by Mr. Walker, who has invented a needle possessing, with the most beautifully-tapered form, an usual and amazing strength, and, above all, a new finish, or silver polish, which prevents their great liability to rust, and enables them to work with a freedom hitherto unknown. They possess the greatest elasticity, yet the hardness and brilliant smoothness of their surface can be equalled only by that of a diamond.—*Court Jour.*

Compensation for Losses.—A French author says: "When I lost my wife, every family in the town offered me another; but when I lost my horse, no one offered to make him good."

CONTENTS OF THIS NUMBER.

Corn-stalk Fodder—Good News from the lower counties—Maryland Horticultural Society's Report—A rich Cargo—Agricultural Chemistry—Farmers' Lyceums—On Cutting Corn-stalks—New-Haven ladies—The Short-Horns, continued—Dr. Youatt's 4th lecture—Pennsylvania Horticultural Society's Report—Internal Improvement; Rail-Road from New-York to Washington—Use of Tomato in quickening the action of the abdominal viscera—Needles—Compensation for losses—Prices Current.

BALTIMORE PRODUCE MARKET.

☞ *These Prices are carefully corrected every* MONDAY.

	PER.	PROM	TO
BRANDY, Apple,	gallon.	$0 27	$—
Peach,	"	—	—
BEANS, white field,	bushel.	—	—
BEEF, on the hoof,	100lbs.	—	5 00
CORN, yellow,	bushel.	66	67
White,	"	68	69
COTTON, Virginia,	pound.	—	—
North Carolina,	"	11	13
Upland,	"	14	15
FEATHERS,	pound.	—	37
FLAXSEED,	bushel.	1 00	1 25
FLOUR—Best white wheat family,	barrel.	6 50	7 00
Do. do. baker's	"	6 00	6 50
Do. do. Superfine,	"	5 25	5 37
Super Howard street,	"	5 12	5 31
" " wagon price,	"	5 00	5 25
City Mills, extra,	"	5 50	5 37
Do.	"	5 25	5 37
Susquehanna,	"	5 25	—
Rye,	"	3 37	—
GRASS SEEDS, red Clover,	bushel.	4 50	—
Timothy (herds of the north)	"	3 00	—
Orchard,	"	3 00	—
Tall meadow Oat,	"	2 50	—
Herds, or red top,	"	1 25	—
HAY, in bulk,	ton.	—	13 00
Pressed,	100 lbs	—	90
HEMP, country, dew rotted,	pound.	6	7
" water rotted,	"	7	8
LIME,	bushel.	30	35
MUSTARD SEED, Foreign,	"	4 50	5 00
Domestic,	"	5 00	—
OATS,	"	29	30
OIL, linseed,	gallon.	—	90
Castor	"	1 70	1 80
PEAS, red eye,	bushel.	—	—
Black eye,	"	—	—
Lady,	"	—	—
PLASTER PARIS, in the stone,	ton.	2 75	—
Ground,	barrel.	1 37	—
PALMA CHRISTA BEAN,	bushel.	2 00	—
RAGS,	pound.	3	4
RYE,	bushel.	62	—
TOBACCO, crop, common,	100 lbs	3 50	5 00
" brown and red,	"	4 50	6 00
" fine red,	"	6 00	8 00
" wrappery, suitable for segars,	"	6 00	12 00
" yellow and red,	"	8 00	12 00
" yellow,	"	13 00	17 00
" fine yellow,	"	15 00	22 00
Seconds, as in quality,	"	4 00	5 00
" ground leaf,	"	5 00	9 00
Virginia,	"	4 00	—
Rappahannock,	"	3 00	4 00
Kentucky,	"	4 00	8 00
WHEAT, white,	bushel.	1 06	1 12
Red,	"	—	1 02
WHISKEY, 1st pf. in bbls	gallon.	28	29
" in hhds	"	26	—
" wagon price,	"	—	—
WAGON FREIGHTS, to Pittsburgh,	100 lbs	1 75	—
To Wheeling,	"	1 50	—
		washed.	*unwash*
WOOL, Prime & Saxon Fleeces,	pound.	50 *to* 60	24 *to* 26
Full Merino,	"	40 50	22 24
Three fourths Merino,	"	35 42	22 24
One half do	"	30 35	21 22
Common & one fourth Meri.	"	28 30	18 20
Pulled,	"	28 31	18 20

WOOL.

LYMAN REED & CO. Commission Merchants, No. 6 S. Charles street, Baltimore, Md.—devote particular attention to the sale of WOOL. All consignments made them will receive their particular attention, and liberal advances will be made when required. May 9.

SUBSCRIBERS can have their volumes of the AMERICAN FARMER neatly half bound and lettered at this establishment, at 75 cents a volume. Most of the Nos. can also be had at 10 cents each, to complete files.

BALTIMORE PROVISION MARKET.

	PER.	FROM.	TO.
APPLES,	bushel.	$0 50	$—
BACON, hams,	pound.	11	—
Shoulders,	"	—	9
Middlings,	"	—	10
BUTTER, printed, in lbs. & half lbs.	"	31	—
Roll,	"	12	20
CIDER,	barrel.	—	—
CALVES, three to six weeks old	each.	4 00	7 00
COWS, new milch,	"	15 00	27 00
Dry,	"	9 00	12 00
CORN MEAL, for family use,	100lbs.	1 62	1 75
CHOP RYE,	"	1 50	1 56
EGGS,	dozen.	9	—
FISH, Shad, trimmed		—	—
" salted,	barrel.	6 37	—
Herrings, salted, No. 1 & 2,	"	3 87	4 00
Mackerel, No. 1, 2 & 3,	"	4 00	—
Cod, salted,	cwt.	—	2 75
LAMBS, alive,	each.	1 25	2 00
Slaughtered,	quart'r	31	50
LARD,	pound.	8	—
ONIONS,	bushel.	—	73
POULTRY, Fowls,	dozen.	—	—
Chickens,	"	2 50	2 75
Ducks,	"	—	2 50
POTATOES, Irish,	bushel.	—	75
Sweet,	peck.	31	—
VEAL, fore quarters,	pound.	7	—
Hind do.	"	8	—

The demand for wool is good at the prices quoted.

ADVERTISEMENTS.

AGRICULUTURAL IMPLEMENT MANUFACTORY.

THE SUBSCRIBER respectfully informs his friends and the public, that he has on hand, and intends to keep, a general assortment of his PATENT PLOUGHS; also, an assortment on the principle of his recently PATENTED PLOUGH, which are acknowledged by those who have used them to be the best and the cheapest ploughs now in use. He manufactures HARROWS, CULTIVATORS, CORN-SHELLERS, THRASHING MACHINES, and other articles in his line; which, he trusts he can furnish of as good quality, and at as reasonable prices as they can be furnished at any other establishment in Maryland. He will, from his own Foundry, supply manufacturers with all kinds of Castings of the best quality metal, for Thrashing Machines of various powers; together with other Castings for Agricultural Implements. He will purchase, or receive on account, any quantity of old iron.

CAUTION.

Iron Founders, Manufacturers and others, who deal in or use the article, are hereby notified that the subscriber has recently obtained LETTERS PATENT for an Improvement on the Plough, which improvement consists of a peculiar form of share, which embraces both a share and two points, and is susceptible of a reverse application, and self-sharpening by the reversion of such application. A definite description or knowledge of the improvement may be had on application to the subscriber, or any of his agents. Every infringement on his invention, either by manufacture or sale without authority, will be subject to the rigor of the law.

RICH'D. B. CHENOWETH.

P. S.—At his old stand, near Front and Ploughman-streets, near Baltimore-street Bridge, or at Jno. Gildea's, old Cheapside. Sep. 2—4t

SEED RYE.

WINTER RYE of an excellent quality, suitable for seed, for sale at 80 cents per bushel, by

I. I. HITCHCOCK,
Sep. 2. American Farmer Establishment.

TALLAVERA WHITE WHEAT.

500 BUSHELS of this seed, grown, and particularly prepared, by Col Anthony Kimmel, Frederick County, Maryland, a sample of which may be seen at my store. For character refer to the American Farmer, (vol. 15, page 161.) Any quantity of which can be obtained about the first of September, by applying personally, or by letter, post paid, to

R. D. BURNS,
9 Bowly's wharf.

Price $1,80 per 60 pounds. Sep. 2.

A MALE FERRET,

IN fine health and condition, is for sale at this Establishment. Price $5. I. I. HITCHCOCK.

TWO VALUABLE SLUTS

ARE offered for sale, each about one year old. The first is a *Pointer* of the very best blood; color brown with some white. She may easily be broke this fall.

The other is out of one of the beautiful grey hound Sluts sent last year from Holland to the President of the U. S. by a fine pointer sent out with the greyhounds. The slut offered is a most beautiful black animal, very active, and appears to have the nose of the pointer with the speed of the grey-hound. Price of each $10. Apply to

aug. 26 I. I. HITCHCOCK.

A MARE IN EXCHANGE FOR CATTLE.

A GENTLEMAN of Virginia is desirous of exchanging a valuable blooded brood Mare for thorough bred Durham short horn Cattle—for sheep of the best blood, or for a good Jackass. Should any gentleman be disposed to make such a barter, he shall receive further information on application to I. I. HITCHCOCK,

aug. 12 Amer. Farm. Estab.

MORUS MULTICAULIS.

THE subscriber has on hand a few hundred of this celebrated Tree, unrivalled in the quality of its leaves as food for the silk worm, for which he is ready to receive orders (accompanied by the cash) with *particular* directions for the delivery of the trees on or after the first of Nov. next. Price 50 cents each, $5 per dozen, or $40 per hundred.

The success and ease with which this tree is propagated, the extraordinary quickness of its growth, the superiority of its leaves over *all* others for the silk culture, and its uncommon luxuriance and beauty, altogether recommend it to the favorable notice of *every farmer* as a most valuable acquisition. I. I. HITCHCOCK,

aug. 26. Amer. Farm. Establishment.

SEED WHEAT, RYE, &c.

THE subscriber offers his services for the procurement of Seed Wheat, Rye, &c. for those who shall provide funds in Baltimore for that purpose. He does not keep those articles on hand, and therefore can send them to those only who furnish him with the *means in advance*. For all such, however, he will use his best judgment to procure such grain as shall be ordered, charging a small commission for his agency. I. I. HITCHCOCK,

Amer. Farm. Estab.

Note—I. I. H. has made arrangements for procuring for cash, Seed Grain of the very first quality, from some of the best farms in Maryland. aug. 12

TURNIP SPINACH & CABBAGE SEED.

A FULL supply of these seeds of several of the best varieties for summer and fall sowing, now on hand and for sale by I. I. HITCHCOCK,

july 1 Amer. Farm. Estab.

SALE OF VALUABLE CATTLE.

THE subscriber intending to break up his Dairy Establishment, will offer at public sale on THURSDAY, the 12th of September next, at his residence near Brookville, Montgomery county, Md. his entire stock of COWS, amounting to 30 head. They are all of the improved Durham Short-Horned, crossed with the stock of the Oakes' Bull, which was raised by Mr. Oakes of Massachusetts, and got by the imported bull Coelebs, and was exhibited and took the premium at the Cattle Show near Baltimore, which was held at the house of the subscriber's brother, Wm. Frame, from whom he procured the young Oakes Bull. The cows are all in fine condition, and worthy the attention of improvers of stock.

Terms made known and attendance given on the day of sale. DAVID FRAME.

aug. 26 2t

THE FARMER & GARDENER;

AND LIVE-STOCK BREEDER & MANAGER.

CONDUCTED BY I. IRVINE HITCHCOCK, AND ISSUED EVERY TUESDAY FROM THE AMERICAN FARMER ESTABLISHMENT, AT $5 PER ANNUM, IN ADVANCE.

No. 19. **BALTIMORE, SEPTEMBER 9, 1834.** **Vol. I.**

☞This publication is the *successor* of the late
AMERICAN FARMER,
(which is discontinued,) and is published at the same office, at five dollars per year, payable in advance.
☞When this is done, 50 cents worth of any kind of seeds on hand will be delivered or sent to the order of the subscriber with his receipt.

American Farmer Establishment.

BALTIMORE: TUESDAY, SEPTEMBER 9, 1834.

NOTICE TO CORRESPONDENTS.—Will. Shakspeare has been received. The facts he relates, as well as the theory he deduces from them, are interesting. It is the most plausible, if not the only theory, we have seen offered, to account for a fact in vegetable economy, which has excited a good deal of attention. It shall appear in due season.

We have received two letters from a valued correspondent in Montgomery county, relating some interesting improvements in his soil, by turning under the old sage, and other modes worthy of imitation. They shall appear soon.

A correspondent from south Alabama, writes us that the crops of corn and cotton, of this season, has not been equalled in the memory of the oldest inhabitants. The country is unusually healthy for the season of the year.

CORNSTALK FODDER.—The subject of cornstalk fodder must this year be one of great interest to the farmer. In our last paper we gave the account of an experiment, instituted for the purpose of testing the effects of cutting off the top of the stalk before the grain had arrived at a state of maturity; and the result proved that an entire loss of twenty per cent. was sustained in consequence of the practice. We accompanied this calculation with some observations, tending to show from reasoning on the physiological and known laws of vegetation, that this calculation was correct. Had the stalks at the same time been taken off at the ground, instead of being cut above the ear, we have no doubt but the loss in the crop would have been less. We know that buckwheat, when cut, has many grains which are but barely formed; yet the sap contained in the stalk proceeds on its course, and nourishes the grain; and we find that the young grains are brought to perfection, after being cut. The same thing would take place in corn if cut at the root, instead of being taken off above the ear.

Any one may satisfy himself, merely by his own taste, that the portion of stalk below the ear contains much more saccharine matter than the upper part, which is saved by topping; and this fact is corroborated by the experience of the writer of this article. He kept three horses and twelve cows in this way. The 12 milch cows were kept in stalls—18 bushels of the stalks, cut in a horse power cutting-box, were every morning put into a trunk having a false bottom, 6 inches from the true bottom—half a bushel of indian meal was mixed as equally as possible through the stalks. The 6 inch space between the true bottom of the trunk, which was perforated with holes to admit the steam through, was divided into two apartments, by a transverse partition; and contained a small portion of water. Into the upper apartment, for one end was a little elevated, was put 4 qts. of flaxseed, every morning; and into this water was admitted steam from a steam engine. The stalks, meal and flaxseed were all cooked in this way, in about one hour and a half after the steam had commenced passing over. The water in which the flaxseed was steeped, was formed into a jelly, was drawn off and poured over the stalks before feeding away to the cattle. The second morning the portion of seed that had been steeped the day before was drawn down to the lower apartment, and replaced with 4 qts. more of seed, and the first portion of seed after the second steeping, was taken with the jelly, and poured over the stalks to be given to the cows. We have before shown the tendency of steaming food, to convert the mucilage, starch, and gummy matter into sugar.

Thus each cow had daily of meal 1 qt. 1⅓ gill; of flaxseed 1⅓ gill; of stalks one bushel and a half. With this feed the cows were kept in a full flow of milk; and when dry, they were in good condition for the butcher.

The cream from their milk made as good and as yellow butter as was made in the summer from white clover and orchard grass pasture.

DR. DUCATEL'S SURVEY OF THE UPPER COUNTIES.

We understand that Professor Ducatel is now going to direct his course to the western counties of the state. There is no doubt but his discoveries in that direction will be equally interesting to the farmer with those already accomplished.

Marl of a different character may be expected to be found as we approach the limestone region. Those on the tide waters derive their calcareous ingredients from the shells lying on the borders of streams, or where the water has covered the earth; but, as we approach the limestone region, the calcareous matter is formed into marl—this is of various degrees of hardness, according to the different quantities of clay or seleceous sand that enters its composition. This kind of marl is known by a greater or less crumbling when exposed to the atmosphere.

There are other points in which the farmers may advantageously avail themselves of the advice of Dr. D. as he progresses through their part of the country—There are many fields to be seen in Frederick and Washington counties, that will yield 12 or 15 bushels of wheat to the acre; but, when left to the natural grasses, will yield little besides sorrel—We have seen whole acres with hardly grass enough to pasture a rabbit; so entirely had the sorrel taken possession of the ground. This was owing to a free acid abounding in the soil, and probably that acid was the carbonic. If this were the case, hydrate of lime would be the proper remedy. We advise all who have land of this description to avail themselves of the Dr's. advice; his retort will soon detect the abounding evil, and indicate the remedy.

MARYLAND HORTICULTURAL SOCIETY,
September 6, 1834.

Mr. John Feast presented some fine bunches of a grape, produced from the seed of the Isabella.

Doctor Chavalier presented one bunch of fine grapes, which he calls the Assyrean.

Mr. Robert Sinclair, Sen., presented a boquette, consisting of the grand purple, orange and yellow, La Brilliant, and royal lilac dahlias; cluster tea rose, common tea, Florence tea and daily roses; and a variety of fine double Altheas.

Mr. Edward Kurtz presented Lobelia speciosa, and Amaryllus purpurea vallata, a fine plant in bloom.

Mr. Samuel Feast presented four seedling roses, Hybiscus splendens, sinenis, variegata, two varieties of Dahlias, Pavonia promosa, &c.

Mr. John Feast exhibited Euphorbia variegata, Rosa Websteria, polymnia Uvidalia, vitex agnus castus, Pink noisett, and white musk roses; Eugenia myrtifolia; Plumbago capensis, Lobelia fulgens; Helianthus; Eupatorium cœlestinum, Hamiltonia roose; Lantona camosa, &c.

THE FARMER.

Agricultural Chemistry—No. 5.

Carbon.—We have treated in a concise manner of oxygen and hydrogen gases, and shown their important offices in vegetation; it now remains for us to examine carbonic acid gas. Those two, with carbonic acid gas, we have shown are the principal constituents of all vegetable matter. Nitrogen gas enters into the composition of a few vegetable substances; but its offices are but little understood, and it is believed they are limited to but a few. It enters more copiously into the composition of animal substances. Charcoal, technically called carbon, when combined with oxygen, forms carbonic acid gas.

If 13 gr. of well burnt charcoal be inflamed by a burning-glass, in 100 cubic inches of oxygen gas, the charcoal will entirely disappear; and provided the experiment be correctly made, all the oxygen, except a few cubic inches, will be converted into carbonic acid; and what is remarkable, the volume of the gas is not changed. On this last circumstance, it is easy to calculate the exact quantity of pure charcoal and oxygen in carbonic acid gas. The weight of 100 cubic inches is to 100 cubic inches of oxygen gas, as 47 is to 34; so that 47 parts in weight of carbonic acid gas must be composed of 34 parts of oxygen and 13 of charcoal.

Carbonic acid is decomposed by heating potassium in it; the metal combines with the oxygen, and the charcoal is deposited in the form of a black powder. The principal consumption of the carbonic acid in the atmosphere, seems to be in affording nourishment to plants; and some of them seem to be supplied with carbon chiefly from this source.

This acid is formed during fermentation, combustion, putrefaction, respiration of animals, and a number of operations taking place on the surface of the earth; and there is no other process known in nature by which it can be destroyed but by vegetation.

We have seen that this gas can be formed by burning pure charcoal in oxygen gas; but it is unnecessary to have recourse to this method of obtaining it, as it exists in great abundance in all objects around us. It constitutes about one thousandth part of the air we breathe. We have shown that it composes nearly one half of the substance of vegetable gum; three-fourths of resin; more than three-fourths of olive oil; more than one half of woody fibre of beach and oak; nearly one half of animal jelly, and more than one half of the cream of the cow—our own bodies are formed in a large degree from the same material. So nearly is it true, that we are a set of *blockheads*, that even our brain, that organ of the sensorium, and immediate receptacle of the emanation of the *Deity*, is in its component parts but little different from the oak, which stands waving in the forest. One eighth part of the substance of this globe, is supposed to be formed of calcareous matter, or lime, in its various forms; and from 41.4 to 43 parts in the hundred, of all that substance, is composed of the gas of which we are treating. It forms the difference between iron and steel. It enters into the composition of the spirit in wine, cider, and other liquors, and forms their lively sparkling, and acid taste. It is likewise this gas which gives value to our mineral waters, and is procured by pouring sulphuric acid on marble. In every 47 cubic inches of air taken in that delightful beverage, we take 13 grs. of charcoal.

The purest state of carbon is the concrete form found in the diamond, which is nearly pure charcoal in a chrystalized form. It is a stalactite of charcoal.

The carbonic acid gas is the most ponderous portion of the atmosphere, and consequently is sometimes found in cellars, wells, and such places as cannot be ventilated by a current of air; where it often proves fatal to human life.

This gas does not support combustion—a lighted taper being introduced into a jar of it is immediately extinguised.

It will not support animal life; hence the danger of burning charcoal in an open furnace, in a tight room, which has no chimney. In combustion of charcoal, the oxygen of the air enters into combination with the dissolved charcoal, as we have seen, and every 13 parts of coal consumes 34 parts of oxygen of the air in the room, and forms carbonic acid gas, which is inimical to animal life. We often hear of persons losing their lives from this cause.

This gas is heavier than common air. Its specific gravity, according to Davy, is 1.5196. 100 cubic inches of this gas weighs 46.5 grs. and the weight of the combined charcoal in that quantity is 12.7 grs.

Carbonic acid gas is absorbed by water. Fill partly a jar with this gas, and let it stand over water for a few hours—*an absorption will gradually go on, till at last none will remain.* This absorption is infinitely quicker when agitation is used. In this way water may be charged with rather more than its own bulk of carbonic acid gas.

On a review of the facts which we have laid before our readers, concerning these gases, who can hesitate to decide the long agitated quertion; what forms the pabulum of plants?

We see that wherever oxygen, hydrogen and carbon, with light and heat, are present, vegetation progresses; where either of them is wanting, vegetation ceases. Nitrogen is sometimes present, but so seldom, and so little known, we do not take it into consideration.

We likewise see, that however varied the form, color, or qualities of vegetables, they are resolved into the elements of these three gases.

The tree is formed from its sap; the sap is taken up in a watery state by the roots; water is composed of one part oxygen, and two parts hydrogen; water absorbs its own bulk of corbonic acid gas; and 47 parts of this gas contains 13 parts of charcoal; which constitutes nearly one half the substance of vegetable matter; and oxygen and hydrogen form nearly all the remaining parts. Then carbon, hydrogen, and oxygen, must form the food of plants. But can all these varied forms presented in the vegetable kingdom, be owing to the different combinations of these simple substances? Whence all this variety of combination? Every organized substance possesses a peculiar structure, on the regular exercise of the functions of which, depends their increase and perfection. All the thousands of forms, which we observe in the vegetable kingdom, proceed from this varied structure.

> These, as they change, Almighty Father, these,
> Are but the varied God.
> * * * * * *
> Mysterious round! what skill, what force divine,
> Deep felt in these appear! a simple train,
> Yet so delightful mix'd, with such kind art,
> Such beauty and beneficence combin'd;
> Shade, unperceiv'd, so softening into shade;
> And all so forming an harmonious whole;
> That, as they still succeed, they ravish still.
> But wandering oft, with brute unconscious gaze,
> Man marks not Thee, marks not the mighty hand,
> That ever-busy, wheels the silent spheres;
> Works in the secret deep; shoots, steaming, thence
> The fair profusion that o'erspreads the Spring:
> Flings from the sun direct the flaming day;
> Feeds every creature; hurls the tempest forth;
> And, as on earth this grateful change revolves,
> With transport touches all the springs of life.

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Invitation to send Specimens to Lyceums.—We have shown in our back numbers, of what substances vegetables are composed; we have likewise given the anatomical structure of the leaves of plants, and have shown their adaptation to the office of concocting the sap of the plant; and we have exposed to view the system of vessels for returning to its appropriate seat in the stock, and in the seed vessels, the prepared sap on which depends the increase and perfection of every part of the plant.

It remains for us now to take up the roots of plants, and to show how they prepare the fluid out of which the future parts of plants, in all their

thousand varied forms, are obtained from the elements and the earth.

To aid us in this interesting enquiry, we are desirous of obtaining the aid of the farmers. We should be glad to obtain vegetables and grasses of every description, with their roots entire, to be deposited in the Baltimore Union Lyceum Rooms.

We are at present desirous of obtaining a stalk of corn with its roots at full length, for the benefit of lectures on vegetable physiology in that institution; which may be sent to this office, or directed to the Lyceum Rooms in North-street.

These rooms will be ready in a few days to receive visitors, and will display a rich assortment of specimens. In this Institution, we will endeavour to superintend the agricultural interest, as fast as specimens can be obtained. The curators have made arrangements to obtain from foreign states, such specimens of marls, and mineral manures, as have been used, with success, and can be obtained; and offer to exchange specimens for corn and grasses, carefully prepared with all their parts in perfection; or other articles which may be of interest.

Gama Grass.—We were visited by a gentleman from New Orleans, the other day, who came to our office to make some enquiry about gama grass—he had heard much said of it of late, and wished to get some of the seed. On being shown a stalk of this grass hanging in the office, he was much surprised to find it an old and familiar acquaintance. It formed his chief dependance for pasture and hay, on one of his plantations below the city. He spoke highly of its qualities for hay, when cut young, and said that cattle fattened well on it in a green state, when a foot or 18 inches high. The only difficulty with it is to keep it down; he says, that when grown from 5 to 9 feet high, and when old, it is not relished by stock. The cattle then go among it to protect themselves from the muschetoes. At this season of the year, or later, they mow it off, burn it, or get it down in any way they can, and for the rest of the fall it makes the most delightful pasture imaginable. He was unacquainted with the fact that it would grow on high land; it being confined in his neighborhood to low and wet grounds.

When we consider that this grass will grow in our climate, and on dry as well as wet soil, it must become a very desirable object with our farmers to obtain it. If the low lands in our neck, and along the banks of rivers and creeks, and on the Eastern Shore of Maryland, instead of being covered with putrefaction, producing disease, and depopulating our country,—we say, if these situations were well set with this grass, and clothed with a verdure of flowing green the year round, and producing fine droves of flabby short-horns, in place of miasmata and death,—we think it would be an improvement in agriculture. And why can this not be done? The gama grass on the experimental farm attached to this establishment, flourishes away finely this dry season.

Knot Grass.—The following notice, we received of a gentleman from N. Orleans. We think from his account of it, that it is an enemy which deserves to be strictly watched. Our legislatures pass prohibitory laws against the introduction of disease, which is floating in the atmosphere; they might be much better employed in attacking the more tangible object of knot grass.

Knot grass, or as the French call it coco, grows in the south and western states; in Mississippi, Missouri, and is spreading along the Ohio river.—This grass is a great evil, and threatens destruction to their country. It spreads rapidly, like all evil examples in the moral world, both from the seed and roots. It grows with bulbs or knots on the root, runs very deep, and wherever a fibre is left it takes root and spreads. Our informer observed it on the banks of the Ohio on his passage up. It will be a good thing for farmers to keep a sharp look out, and attack it on its first approach in the country. We sound the alarm, and shall be glad to hear more of it. If it is on its way up the Ohio, with the steamboat navigation, it may soon reach us. Our informant observes that it entwines around the roots of the sugar cane, and it is almost impossible to subdue it.

[From the Cultivator.]

Ribbon Grass.—The ribbon grass of our gardens, (*Phalaris Americana*) is likely to become of great value in our husbandry: it has been found to be better adapted to wet boggy grounds than any other species of grass; to propagate rapidly either by its seeds or by its roots; to yield a very large product in hay or pasture, and to be well adapted to farm stock. The first suggestion of this fact come to us in a letter from Abednego Robinson of Portsmouth, N. H. who says the discovery was accidental.

"A neighbor, he says, wishing to get rid of some of the roots which encumbered his garden, threw them into a bog, where they took root and spread over a large space of ground, excluding every other plant. The water flows through the roots at all seasons. The turf has become so solid as to bear a cart and oxen. I walked through this grass when in bloom, and never beheld a more handsome and luxuriant growth. It stood perfectly erect, full of large leaves, even, and from four to five feet high. It will produce two good crops in a season, and springs up immediately after the scythe. It produces excellent food; cattle feed it close and appear to be more fond of it when made into hay than any other grass. I have spoken for one-half of the roots of the patch, and have ground in my meadow into which I intend to transplant them about the distance of corn-hills."

On a recent visit from the Hon. E. Goodrick, of Harford, we were happy to receive, from that gentleman, a confirmation of the good opinion of the *phalaris* which had been induced by Mr. Robinson's letter. It has been found as beneficial in Connecticut as New Hampshire. Not recollecting the particulars narrated, we would beg of Mr. Goodrick, when he sees this, to forward them to us, in order that we may furnish them correctly. The subject merits further attention; and if our anticipations are not irrationally founded, the *Phalaris Americana* will yet become the gama grass of the north. It is truly perennial, spreads rapidly, and may be inoculated in the manner suggested by Mr. Robinson, especially in a soil saturated with water, with great facility and a trifling expense.

THE BREEDER & MANAGER.

[From the Farmers' Series.]

The Short-horns.—Wherever the improved short-horns have been crossed with other cattle their superiority is equally manifest, in respect of dairy qualifications, as in every other. On this subject the writer is able to avail himself of the evidence of a gentleman who has addressed a communication on the subject to the conductor of the *British Farmer's Magazine*, which is so pertinent to the present subject that the temptation to take an extract is irresistible. It is as follows:—"In the 27th number of your valuable Magazine, when giving an account of my two years old steer, you also give an extract from my letter on the advantages of crossing cows of different breeds with improved short-horn bulls; and in confirmation of this opinion (not hastily adopted, but the result of several years' practical experience, and a close attention to the experiments of several friends during the last seventeen years,) I send you a short account of a two-year old Durham and Devon heifer of mine, lately slaughtered by Mr. William Daniel (of Abergavenny,) and accompanying it with a few brief statements of the advantages derived from this system by several of my own personal friends.

"This heifer was the second cross, and was of a light grey color. She weighed 35 scores and 8 lb.; rough fat, 98 lb: she was allowed to be the fattest and best beast of her age, in all points, ever seen in Abergavenny. She had a dead calf about six weeks before Christmas; was dried the 17th of January, and killed the 10th of June. She sold for £19 3*s* 6*d*.

Her live weight, on the 8th of June, was	1232
Ditto, on the 17th January,	840
Increase in 140 days,	392

"Being aware that strong prejudice and much incredulity existed on the subject of crossing, I courted the attention of all the respectable farmers, breeders, and feeders in this neighborhood. Many came to see her when first put up, and repeatedly afterwards during the five months she was feeding; and they all concurred in saying she went on faster than any beast they had ever seen. She never had any oil cake.

"I have seen many excellent beasts bred from

improved short-horn bulls and long-horn cows: indeed, I never knew one of these bulls put to any cow, where the produce was not superior to the dam; but the cross which I advocate, and with which I am best acquainted, is that with the Devon cow. I have uniformly remarked, that each succeeding cross was attended with a proportionate improvement in size, quality of flesh, and aptitude to fatten. In every instance they have shown themselves superior milkers, and stand to the pail till within six or eight weeks of calving; and several instances have come under my own knowledge where they have never been dry since they first calved; and so highly are they prized as milkers, that a friend of mine, who hired out dairies, informed me that the dairyman gave him nearly £2 per cow per year more for the half and three-quarter breeds than they would give for cows of other breeds.

"A friend of mine had about a dozen North Devon cows, small in size, but nice in quality, and from these he commenced, about twenty years since, breeding with short-horn bulls. He has since invariably used those bulls. With each succeeding cross the stock have rapidly improved in every essential, and the only trace of the Devons which I could perceive when I last saw them, about two years since, was a peculiar richness in their color. He breeds about thirty annually, and generally sells his three-years old in the autumn, at £17 to £22; and I have known him sell in-calf heifers to jobbers in fairs as high as 30 guineas each. All his stock are superior milkers. Here we have twenty years' experiment, and continued improvement.

"Within the last eight years I have sent many North Devon heifers to Ireland, to friends residing in different counties; and some of them occupying land of very inferior quality. I also sent over two young Durham bulls, from the stock of the Rev. Henry Berry, to cross them with. They have all crossed them with short-horn bulls at my recommendation, and the accounts they give are most satisfactory. They say the two-years'-old half-breds are as good as the three-years'-old Devons, and are all good milkers. One of these bulls, by Mr. Berry's *Mynheer*, has been four times exhibited in three different counties, and has each time taken the first prize. He was last year sold for 60 guineas, and is now serving cows at £1 each. C. H. BOLTON.

"*Brynderry, near Abergavenny.*"

An opinion generally prevails that the short-horns are unfitted for work; and in some respects it is admitted they are so: but the correct reason has not been assigned, and the question may fairly come briefly under notice. That they are willing and able to work, the writer knows, from one in particular among many instances. He has now a team of two years'-old steers, working constantly nine hours a day; a system he would by no means recommend, and forced on him by circumstances connected with entrance on a new farm, at present ill adapted to grazing cattle. They work admirably; but surely cattle which, as the preceding account proves, will go as profitably to the butcher at two-years'-old as any other breed at three, and as many even at four, ought never, as a general rule, to be placed in the yoke. No beast, in the present advanced state of breeding, ought to be put upon a system which arose out of the necessity of obtaining compensation by work for the loss attending a tardy maturity. But where it may be convenient, the short-horns, particularly the bulls, work admirably, as their great docility promises; and there are many operations going on in every farm which a bull would be judiciously employed in performing. And as the bulls of this breed are apt to become useless, from acquiring too much flesh in a state of confinement, moderate work might, in most cases, prove beneficial for such as are intended for use at home.

As was before observed, the specimens which accompany this account will render little comment necessary on their form. With deference, however, it is submitted to the breeders of short-horns that they should avoid breeding from too close affinities, and, while they steer clear of coarseness, should require a sufficiency of *masculine* character in their males.* This is a point in which many short-horns are rather defective, and it is one of infinite importance. Add to this, that if, in many instances, the length of the carcase were abated, as well as that of the legs, a hardier animal, with equal size and on a more profitable scale, would be produced. The facilities for making this improvement are sufficiently numerous, the short-horns being now more generally diffused. That wider diffusion also multiplies the means of selecting for milk; a quality which should not be lost sight of: for it is the *combination* of perfections which has conferred, and will perpetuate, the superiority of this breed of cattle.

The colors of the improved short-horns are red or white, or a mixture of the two, combining in endless variety, and producing, very frequently, most brilliant effect. The white, it is very probable, they obtained from an early cross with the wild breed; and whenever this color shows itself, it is accompanied, more or less, with a red tinge on the extremity of the ear: a distinctive character, also, of the wild cattle. No *pure improved short-horns* are found of any colors but those above-named. There is a large coarse short-horn, prevailing particularly in Lincolnshire, denominated in the quotations of the Smithfield markets 'Lincolns,' and generally sold at prices below those of any other cattle. These are frequently black, black and white, blue, and dun; but they have no further affinity with the improved short-horns than as the latter have been referred to for their improvement, which has been accomplished to a considerable degree. A similar description of large, coarse short-horns, of these objectionable colors—for they generally accompany a bad quality of flesh—prevails in some of the midland counties. They are great consumers of food, gutty, and particularly low and bad in the loins, with excessively heavy shoulder-blades. The owners of this stock, however, are crossing the improved breed; but the dairy-farmers of Gloucestershire are so much alive to the superiority of the short-horns, that they lay hold with avidity of any thing which approaches them in color, or is called by the name. Indeed, should this breed continue to obtain the requisite attention, to maintain it in its present excellence, it is not too much to suppose that it will, before long, alter the character of the cattle in most of the breeding districts. It would have been thought incredible some years ago, but is nevertheless the fact, that they are treading closely on the strong holds even of the Herefords; and an observing traveller, who sees their colors starting to view in very unwonted situations, must pronounce them universal intruders.

Thus far Mr. Berry, whose admirable account of the improved short-horn cattle our readers will duly estimate. There is no point which he has more triumphantly illustrated, than the value of this breed, as containing a *combination* of perfections. It was a point which was in a manner lost sight of by the early improvers. They developed the aptitude to fatten, and the early maturity of the short-horns, but they neglected, and were beginning to lose, their milking properties. This is also the grand error of many modern breeders; and hence arose the general impression, and founded on careful observation, that in proportion as the grazing properties of the beast were increased, its value for the dairy was proportionably diminished.

The Yorkshire cow, which now almost exclusively occupies the London dairies, is an unanswerable proof of the possibility of uniting the two qualities to a great degree of perfection, *but not at the same time:*—they succeed to each other, and at the periods when it suits the convenience of the dairyman that they should. Twenty years ago the Yorkshire cow was, compared with other breeds, as great a favorite in the London market as at present. She yielded more milk, in proportion to the quantity of food consumed, than could be obtained from any other breed; but when the dairyman had had her four or five years she began to fall off, and he dried her, and sold her. It took a long time to get much flesh upon her bones; and when he calculated the expense of bringing her into condition, he found that his cheapest way was to sell her for what she would fetch, and that seldom exceeded £5.

By degrees, however, some of the more intelligent of the breeders for this market began to find that, by cautiously adopting Mr. Berry's principle of selection,—by finding out an improved short-horn bull, whose progeny were generally milkers, and crossing some of the old Yorkshires with him, and then going back to the pure blood—but still regarding the milking properties of the dam, and the usual tendency to possess these qualities in the offspring of the sire—they could at length obtain a breed that had lost little of the grazing properties of the new breed, and retained, almost undiminished, the excellencies of the breed for the

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* Lord Althorp first adopted the short-horns in 1818, when he purchased the bull *Regent* at Mr. R. Colling's sale, with several of that gentleman's cows; and since that time his lordship has been unremitting in his attempts to improve the breed. The bull *Firby* is good in almost every point. His flanks, loins, hips, and bosom are excellent. His only failing is in the crop; yet we are told by his lordship's very intelligent steward (Mr. Hall), and we had proof of the accuracy of the observation, when we had the pleasure of looking over the Wiseton herd, that, using him six years, very few of his stock have inherited this imperfection. —*Edit.*

pail. Thence it has happened that many of the cows in London dairies are as fine specimens of the improved short-horn as can possibly be produced. They do not, perhaps, yield *quite* so much milk as the old ones, but what they do yield is of better quality; and whether the dairyman keeps them a twelvemonth, or a little longer,—and this is getting more and more the habit of these people,—or whether he milks them for three or four years,—as soon as he dries them, they fatten as rapidly as the most celebrated of the improved breed. Mr. Parkinson gives an account of one which, after being milked to the 5th of April, was put to grass with others, and sold on the 5th of July, after 91 days' grazing, having made in that time nearly 2*s* a day.

[From the London Lancet.]

LECTURES ON VETERINARY MEDICINE,

Delivered in the University of London, by Mr. Youatt.—LECTURE IV—CONTINUED.

THE NOSTRILS AND THE SCHNEIDERIAN MEMBRANE.

Of Membrane generally.—As this is the first membrane which has presented itself to our consideration, I must say a few words of the nature and structure of membrane generally. It is that portion of the frame which is the basis and mould of all the rest. It is diffused over the whole frame. It composes the tissue in which the earthy matter of every bone is deposited, and constitutes the main bulk of every bone. It encloses every muscle as its external sheath; it enwraps every bundle of fibres, every individual fibre, and perhaps, the ultimate fibre may consist of condensed membranes. I will not detain you with any theory of its own ultimate structure, whether solid or vascular; each has its supporters; while a third party maintains that the fibre of the membrane is alive; is composed of innumerable living beings. I will not detain you with this, but proceed to observe that the tendons are composed of flattened plates of membrane; the ligaments of membrane otherwise arranged; the cartilages, terminated, defended by, made up of membrane; the brain enveloped by it, and formed of it; the nerves surrounded by it, every fibril coated with it; the nervous substance seemingly fibrous; and, the properties of membrane being cohesion, extensibility, and elasticity, the bladder, the stomach, the heart, the arteries, the integument, composed of it, and illustrating the qualities of it.

Nor will I detain you with the chemical history of membrane; or its division into cellular, or adipose, or fibrous, or serous; these will in turn come before us, but content myself with observing, that this is a *mucous* membrane, so called from the fluid discharged from its vessels,—a true secretion;—every mucous membrane supplied with innumerable glands; lining those cavities which communicate with the external air, as the mouth, the respiratory passages, the digestive; apparently far more important than the serous membranes; the serous in many cases being only designed to prevent friction and facilitate motion, while the mucous membranes are generally connected with important functions—the mouth with taste, the nose with smell, the stomach with digestion, and the intestines with nutrition; possessing more blood-vessels, more nerves, consequently more prone to disease, and disease of a particular character; inflammation in one taking on an ulcerative character, the other accompanied by effusion and adhesion; one involving, by intercommunication of nerves and vessels, surrounding parts; the disease of the other strangely peculiar to itself—peritonitis running its course without affecting the mucous membrane of the intestines, the mucous membrane seldom long or violently inflamed, without involving the peritoneal; inflammation of a serous membrane rarely accompanied by prostration of strength; that of a mucous membrane speedily followed by debility.

The Schneiderian Membrane.—The mucous membrane lining the nose is continuous with that of the sinus with which the nasal passage communicates, and with those of the nasal duct, the lachrymal sac, the conjunctiva, the membrane of the pharynx, the trachea, the air-cells, the mouth, the tubes of the parotid and submaxillary glands, the Eustachian tubes, the tympanum of the ear; the œsophagus, the stomach, the intestines, the biliary and pancreatic vessels, the urinary and genital passages.

The Schneiderian membrane may be considered as presenting two surfaces, an adherent and a free one; the adherent being very firm, with difficulty separated from the bone beneath, and forming a kind of periosteum to the bone. Lying on this is a reticulated mass of blood-vessels and nerves, particularly on the septum, and the æthmoid and superior turbinated bones. There is no part of the frame more vascular. On this is the free surface, covered with a mucous fluid to protect it from the painful or dangerous influence of the air, the food or other foreign objects, and being a kind of factitious integument, particularly beneficial in the respiratory passages, subject to the injurious influence of sudden change of temperature or stimulating gases, and in the intestines, defending them from the occasional acrimony of some of the ingesta. When this membrane is carefully examined, there are numerous minute rounded apertures, irregularly distributed, most plentifully on the lower part of the septum, and on the inferior turbinated bone—smaller, and scarcely to be traced on the upper part of the septum, or on the æthmoid bone: given mostly where there is most exposure to injury. Superiorly it is comparatively devoid of mucus, that the olfactory nerves and the lateral nasals may ramify with more effect, and be more sensible to impression. When the intermediate substance is traced with great minuteness, it is found to be glandular; but not composed of distinct glands, or even of the smallest granulations, but a bed of glandular matter. The natural discharge is limpid, small in quantity, and scarcely seen at the nostril. Under inflammation it becomes increased in quantity, thickened, opaque, and even purulent, and that either with or without ulceration.

In the convolutions of the æthmoid and turbinated bones, and in the sinuses of the face and head, the membrane is thinner, more delicate in its structure, and the mucous secretion lessened in quantity. These parts are out of the reach of danger. No current of air blows upon them—no foreign body can injure them; and, their function being limited, they have fewer blood-vessels and nerves; the membrane is more easily torn from its attachment, and it possesses comparatively little sensibility. Although the function of these sinuses and their membranes is imperfect, it seems to be of a double character. The voice is effected by the sinuosities of the passages, and the air lingering in them, the sense of smell is possibly more acute and faithful.

These are mucous membranes. Then their first and distinguishing characteristic under inflammation is, increased mucous secretion, and that often assuming a purulent form. This increased secretion, under inflammation, is a beautiful provision of nature: it warns us of the presence of the evil, it relieves the engorged vessels, and it covers and defends them from those painful impressions to which their increased sensibility would expose them.

The mucous membrane of the nose, although smooth and soft, is covered by innumerable papillæ. On the superior portion of the nasal cavity, both on the septum and the æthmoid bone, they are particularly evident. These have nothing to do with secretion or exhalation; they are connected with the sensation of the part; they are the termination of the nerves, whether of peculiar or common sensation. These papillæ are smaller than in most mucous surfaces—small indeed when compared with those on the tongue. Continually exposed to rapid currents of air, and to the influence of pungent gasses, and to extreme variations of temperature, little common sensibility was wanted, it was only needed that the sense of smell should be acute in a degree corresponding with the situation and habits of the animal. If the papillæ, however, are not large, they are more numerous than on other membranes, the olfactory nerve is more spread over the surface then terminating in fibriculi.

The nasal cavity is plentifully supplied with blood-vessels, and particularly from the lateral nasal branch of the internal maxillary artery, which enters through the æthmoid cells, to be distributed chiefly over the membrane of the septum. Other branches ramify on the æthmoid and turbinated bones; and the lower part of the nostrils is indebted to the facial artery and to the palati-maxillary.

THE GARDENER.

INSECTS INJURIOUS IN HORTICULTURE.—In the summer of 1826, when at Brussels, I observed that delicious vegetable of the cabbage tribe, so largely cultivated there, under the name of *Jets de choux*, and which in England we call Brussels sprouts, to be materially injured in the later stages of its growth by the attacks of the turnip-flea, and other little beetles of the same genus (Haltica), which were so numerous and so universally prevalent, that I scarcely ever examined a full-grown plant from which a vast number might not have been collected. Some plants were almost black with them, the species most abundant being of a dark æneous tinge. They had not merely eroded the cuticle in various parts, so as to give the leaves a brown blistered appearance, but had also eaten them into large holes, at the margin of which I often saw them in the act of gnawing; and the stunted and unhealthy appearance of the plants, sufficiently indicated the injurious effect of this interruption of the

proper office of the sap. What was particularly remarkable, considering the locomotive powers of these insects, was that the young turnips, sown in August after the wheat and rye, close to acres in Brussels sprouts, (which all round Brussels are planted in the open fields among other crops) infested by myriads of these insects, were not more eaten by them than they usually are in England, and produced good average crops. It would seem, agreeably to the fact already mentioned, that they prefer the taste of leaves to which they have been accustomed, to younger plants of the same natural family; and hence, perhaps, the previous sowing of a crop of cabbage plants in the corner of a field meant for turnips, might allure and keep there the great bulk of these insects present in the vicinity, until the turnips were out of danger.—*Kirby and Spence's Introd. to Entom.*

Hypogymna dispar.—These larvæ were so extremely numerous in 1826, on the lines of the Allée Verte at Brussels, that many of the trees of that noble avenue, though of great age, were nearly deprived of their leaves, and afforded little of the shade which the unusual heat of the summer so urgently required. The moths which in autumn proceeded from them, when in motion towards night, swarmed like bees, and subsequently on the trunk of every tree might be seen scores of females depositing their down-covered patch of eggs. In the park they were also very abundant; and it may be safely asserted that, if one half of the eggs deposited were to be hatched, in 1827 scarcely a leaf would remain in either of those favorite places of public resort. Happily, however, this calamity seems likely to be prevented. Of the vast number of patches of eggs which I saw on almost every tree in the park about the end of September, I could two months afterwards, to my no small surprise, discover scarcely one, though the singularity of the fact made me examine closely. For their disappearance, I have no doubt, the inhabitants of Brussels are indebted to the titmouse (Parus), the tree-creeper (Certhia familiaris), and other small birds known to derive part of their food from the eggs of insects, and which abound in the park, where they may be often seen running up and down the trunks of trees, at once providing their own food, and rendering a service to man, which all his powers would be inadequate completely to effect.

Ceaumur, in certain seasons, found these patches of eggs so numerous, that in the Bois de Boulogne there was scarcely an oak, the under side of the branches of which was not covered by them for an extent of 7 or 8 feet. He informs us that the eggs are not hatched till the following spring.—*Ibid.*

Liquid Manure.—The farmers and gardeners of German Switzerland give the name of *gülle*, in French *lizier*, to the liquid manure obtained from their stalls and stables, and collected into underground pits or reservoirs, in which it is allowed to ferment in a mucous or slimy state. The manner of collecting it, adopted by the agriculturists of Zurich, is as follows:—The floor on which the cattle are stalled is formed of boards, with an inclination of 4 in. from the head to the hinder part of the animal, whose excrements fall into a gutter behind, in the manner usual in English cow-houses. The depth of this gutter is 15 in., its width 10 in.; it should be so formed as to be capable of receiving at pleasure water to be supplied by a reservoir near it: it communicates with five pits by holes, which are opened for the passage of the slime, or closed, as occasion requires. The pits, or reservoirs of manure, are covered over with a floor of boarding, placed a little below that on which the animals stand. This covering is important, as facilitating the fermentation. The pits, or reservoirs, are made in masonry, well cemented, and should be bottomed in clay, well beaten, in order to avoid infiltration. They should be five, in order that the liquid may not be disturbed during the fermentation, which lasts about four weeks. Their dimensions should be calculated according to the number of animals the stable holds, so that each may be filled in a week: but whether full or not, the pit must be closed at the week's end, in order to maintain the regularity of the system of emptying. The reservoirs are emptied by means of portable pumps. In the evening the keeper of the stables lets a proper quantity of water into the gutter; and on returning to the stable in the morning, he carefully mixes with the water the excrement that has fallen into it, breaking up the more compact parts, so as to form of the whole an equal and flowing liquid. On the perfect mannner in which this process is performed, the quality of the manure mainly depends. The liquid ought neither to be thick, for then the fermentation would be difficult, nor too thin, for in that case it would not contain sufficient nutritive matter. When the mixture is made, it is allowed to run off into the pit beneath, and the stable-keeper again lets water into the trench. During the day, whenever he comes into the stable, he sweeps whatever excrement may be found under the cattle into the trench, which may be emptied as often as the liquid it contains is found to be of a due thickness. The best proportion of the mixture is three-fourths of water to one-fourth of excrement, if the cattle be fed on corn: in a course of fattening, one fifth of excrement to four-fifths of water will be sufficient.—*Bull. du Comité d' Agri. de la Soc. des Arts de Genève.*

This mode of increasing the manure produced by stalled cattle and cows, is in general use in Holland and the Netherlands, and we have seen it practised in France, at Trappe and Grignion, near Versailles; at Roville, near Nancy; at Ebersberg and Schleissheim, near Munich; and at Hohenheim and Weil, near Stuttgard. We would strongly recommend the practice to the British farmer, and not to the farmer only, but to every cottager who keeps a cow or pig; nay, to the cottager who is without these comforts, but who has a garden; in which he could turn the great accession of manure so acquired to due account. Let him sink five tubs or large earthen vessels in the ground, and let the contents of the portable receiver of his water-closet, all the water used for washing in the house, soap-suds, slops, and fermentable offal of every description, during a week, be carried and poured into one of these tubs; and if not full on the Saturday night, let it be filled up with water of any kind, well stirred up, the lid replaced, and the whole left for a week. Begin on the Monday morning with another tub; and when, after five weeks, the whole five tubs are filled, empty the first at the roots of a growing crop, and refill; or use two larger tubs, and continue filling one for a month; then begin the other, and at the end of a month empty the first; and so on.—*Cond.*

From the Gardener's Magazine.

Experiments made by M. Toussaint, Nurseryman at Berlin, to ascertain what Influence different Soils and Manures have on Annual Plants.

M. Toussaint says a satisfactory result of this object could only be expected after experiments conducted through several years; but, as one summer (the given time to answer this prize question) is too short to answer this question with certainty, he considers the following results only a proof that it would be worth while to carry these experiments to a greater extent. For his observations he chose melon plants (Barbaresken, a sort of cantaloupe,) a variety which, by its size and abundance of juice, is most fitting to show minutely what influence different soils and manures have upon it; which, however, could only be correctly ascertained in the course of time, as it must be considered that the seeds were taken from fruit produced in a different soil from that in which the experiment was made. The seeds were chosen as much as possible of equal weight and size. Fresh dung from pigs, cows, and horses, and loam, and decayed wood, were the ingredients with which the experiments were carried on. These were mixed with leaf mould in the following proportions: firstly, one third of leaf mould, and two thirds of one of those manures; secondly, one third of one of the above manures, and two thirds of leaf mould, which gave ten different mixtures, in which the seed were sown. The temperature was also ascertained by a thermometer fixed in the middle of each frame. Two fresh and two old seeds were sown at an equal depth in each light, from which two plants were afterwards removed into another frame, filled with common garden soil only. The progress and result of this experiment is minutely shown in a table, and here it is only necessary to mention that twenty plants from old seeds produced eight fruits more than twenty from fresh seeds, and that the fruits of those plants which had not been transplanted weighed, on an average, 2 lbs. 2 oz.; while those from plants which were transplanted weighed 2 lbs. 8 oz. on an average. Finally, M. Toussaint wishes that such experiments may be carried on by others, and a garden appropriated to this purpose, to ascertain the best and most durable soil and manure for those plants, [Mr. Figgans' communication, p. 567., on the results of growing the cucumber and the melon in heath mould, is congenial with the above experiments.]

The result of this experiment, respecting the flavor, was, that the best-flavored fruit were produced in the mixture of two thirds leaf mould and one third horse-dung; the fruits produced in the other mixtures were less delicate, although superior in flavor to others produced in the common garden soil. The least-flavored, which were sweet, but mealy, were those produced in the mixture of two thirds cow-dung and one third turf.

MISCELLANEOUS.

France.—French silks exported to England. It is not so stated, but we suppose that the value in Francs is shewn. For ordinary purposes, 5 francs may be counted as equal to one dollar.

1818	1,744,105
1819	2,713,583
1820	2,727,748
1821	2,815,178
1822	3,516,328
1823	2,901,670
1824	3,856,465
1825	6,104,103
1826	7,596,421
1827	11,450,119
1828	17,311,710
1829	10,483,777
1830	15,204,388

The salary of the Lord Chief Justice of England is $44,444. The salary of the Chief Justice of the United States is $5,000.

Beautiful Extract.—*By Honorable Joseph Hopkinson, L. L. D.*—"The American parent does an injustice to his child which he can never repair, for which no inheritance can compensate who refuses to give him a full education because he is not intended for a learned profession—whatever he may intend, he cannot know to what his son may come, and if there should be no change in this respect, will a liberal education be lost upon him because he is not a lawyer, a doctor or a divine? Nothing can be more untrue or pernicious than this opinion. It is impossible to imagine a citizen of this commonwealth to be in any situation in which the discipline and acquirements of a collegiate education, however various and extended, will not have their value. They will give him consideration and usefulness, which will be seen and felt in his daily intercourse of business or pleasure; they will give him, weight and worth as a member of society, and be a never failing source of honorable, virtuous and lasting enjoyment, under all circumstances in every station of life.—They will preserve him from the delusions of dangerous errors, and the seduction of degrading and destructive vices. The gambling table will not be resorted to, to hasten the slow and listless step of time, when the library offers a surer and more attractive resource. The bottle will not be applied to, to stir the languid spirit to action and delight, when the magic of the poet is at hand to rouse the imagination, and pour its fascinating wonders on the soul. Such gifts, such acquirements, will make their possessor a true friend, a more cherished companion, a more interesting, beloved and loving husband, a more valuable and respected parent."

Extraordinary Performance.—A young man of Mechanicsville, Bucks County, undertook on Fifth day, the 7th inst. in the field of Everard Foulke, Buckingham, to rake and bind 25 dozen of oats in 60 minutes; and to the astonishment of all present, he performed the task in 51 minutes: every dozen judged to make one bushel of clean oats.—*Doylestown Intelligencer.*

Cockroaches.—A gentleman has recently discovered that spirits of turpentine is an effectual remedy against the depredations of cockroaches. He recommends to put a little of it upon the shelves or sides of book cases, bureaus, armories, or other furniture in which they take shelter, and these troublesome insects will soon quit, not only the furniture, but the room.—The remedy is simple, and is easily obtained by every person who wishes it. It is not unpleasant to the smell, soon evaporates, and does no injury to furniture or clothing.

Spontaneous Combustion.—An instance occurred in this city, a night or two ago, which might have proved very destructive in its consequences. A canvas cover for a Jersey waggon, painted during the day in a coachmaker's shop, and in the evening was compactly folded up, and left on the top of the vehicle for which it was intended. Next morning, it was found that it had taken fire from the linseed oil with which it was impregnated, and was entirely burnt up. Nothing probably saved the shop and its contents, but the circumstance of there being more of tow than cotton in the canvas, which is a less combustible material. The cotton cords attached to it were totally consumed, leaving not a vistige behind.—*Raleigh Register.*

The Schoolboy's Excuse for being Late.—Why so late? said a schoolmaster to a little urchin, as he entered the room, on a cold slippery morning in February. "Why, sir," replied the boy, "I would take *one* step *forwards*, and slide *back two*." "Indeed!" said the teacher; "then how did you get here at all; if that was the case!" "Oh," said the boy, scratching his head, on finding himself caught, "I turned around and walked the other way."

An editor, who deprecates the employment of females as type-setters, and who thinks they had better be employed in making pudding than *pi*, attempts to throw a damper upon the custom, by persuading his friends never to choose a wife from a printing office. We are of opinion, that the quickest way to get rid of them, is to marry them off, faster than they learn the art.—*Boston Post.*

Goldsmith, after he had written the Vicar of Wakefield, was in a state of perplexity; he owed his landlady £10. She was very urgent for payment, but give him to understand if he married her the bill was settled. Dr. Johnson called to see him, looked over his manuscript and thought he would try and raise the money. He took the Vicar of Wakefield to the bookseller, and sold it for a considerable sum; which paid the widow's bill and saved him from matrimony.

Connecticut.—The school fund of Connecticut now amounts to $1,929,738 60, and is invested in the following manner. In bonds, contracts and mortgages, 1,432,620 01; bank stock 147, 450 00; buildings and cultivated land, 197,018 14; wild lands, 134,202 16; stock on farms, 1,810 00. The amount on hand in cash is $16,638 29.

I never knew an ignorant and low minded person think well of those around him. He will contradict the smallest errors in others, while his own pass unheeded. No person has his knowledge—no person his understanding. He is the greatest talker and his voice the most loud, and no man is considered as high as himself. A great talker and one quick to laugh at others' faults, shows a weak, mean, ignorant and degraded heart.—Pente.

A Swelling Blessing.—A fellow at school, who was always accustomed to begin his epistles after one certain mode, namely, by mentioning his own health, and wishing the same blessing to those to whom he was writing, thus began a letter to his mother:—

"*Dear Marm:*—I take my pen in hand to inform you that I am down-sick with the mumps, and hope these few lines will find you enjoying the same great blessing."

To preserve Vines from Bugs.—Glauber Salts, Sulphate of Soda, an ounce, dissolved in about one quart of water and sprinkled on the plants or vines, is recommended as a preventive against insects.

Effect on the air on firing Cannon.—Mr. Robertson, the aeronaut, in his last ascension from Castle Garden, states that he was very much annoyed by the firing of cannon, perhaps at the Navy Yard.—Every discharge made his balloon shake like an aspen; and at times, he was not without apprehension of danger from the circumstance. The increase of the distance from the earth, did not diminish the effect of the concussion.

Peaches.—The New York Post says, there is probably no part of the country where Peaches are cultivated to the same extent as at Shrewsbury, in New Jersey, near Sandy Hook and Long Branch. Shrewsbury has got to be as famous for good peaches, as Newark formerly was for cider. The farmers have orchards of from 2,000 to 10,000 peach trees. Mr. Jones of Shrewsbury, carries this business to the greatest extent. He has now upwards of 30,000 peach trees, on three farms. Last spring, when his trees were in full blossom, he expected to bring to market 20,000 *baskets of peaches*, but the frost of 14th May destroyed nearly all the fruit, and he now does not expect to get over 4000 baskets from the same trees.

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BALTIMORE PRODUCE MARKET.

☞ *These Prices are carefully corrected every* MONDAY.

	PER.	FROM	TO
BRANDY, Apple,	gallon.	$0 27	$—
Peach,	"	—	—
BEANS, white field,	bushel.	—	—
BEEF, on the hoof,	100lbs.	5 00	5 25
CORN, yellow,	bushel.	65	66
White,	"	66	68
COTTON, Virginia,	pound.	—	—
North Carolina,	"	11	13
Upland,	"	14	15
FEATHERS,	pound.	—	37
FLAXSEED,	bushel.	1 00	1 25
FLOUR—Best white wheat family,	barrel.	6 50	7 00
Do. do. baker's	"	6 00	6 50
Do. do. Superfine,	"	5 00	5 25
Super Howard street,	"	5 12	5 31
" " wagon price,	"	5 00	5 25
City Mills, extra,	"	5 25	5 37
Do.	"	5 00	5 25
Susquehanna,	"	5 25	—
Rye,	"	3 37	—
GRASS SEEDS, red Clover,	bushel.	4 50	5 00
Timothy (herds of the north)	"	3 00	—
Orchard,	"	3 00	—
Tall meadow Oat,	"	2 50	—
Herds, or red top,	"	1 25	—
HAY, in bulk,	ton.	—	13 00
Pressed,	100 lbs	—	90
HEMP, country, dew rotted,	pound.	6	7
" water rotted,	"	7	8
LIME,	bushel.	30	35
MUSTARD SEED, Foreign,	"	4 50	5 00
Domestic,	"	5 00	—
OATS,	"	29	30
OIL, linseed,	gallon.	—	90
Castor	"	1 70	1 80
PEAS, red eye,	bushel.	—	—
Black eye,	"	—	—
Lady,	"	—	—
PLASTER PARIS, in the stone,	ton.	2 75	—
Ground,	barrel.	1 37	—
PALMA CHRISTA BEAN,	bushel.	2 00	—
RAGS,	pound.	3	4
RYE,	bushel.	62	—
TOBACCO, crop, common,	100 lbs	3 50	5 00
" brown and red,	"	4 50	6 00
" fine red,	"	6 00	8 00
" wrappery, suitable for segars,	"	6 00	12 00
" yellow and red,	"	8 00	12 00
" yellow,	"	13 00	17 00
" fine yellow,	"	15 00	22 00
Seconds, as in quality,	"	4 00	5 00
" ground leaf,	"	5 00	9 00
Virginia,	"	4 00	—
Rappahannock,	"	3 00	4 00
Kentucky,	"	4 00	8 00
WHEAT, white,	bushel.	1 06	1 12
Red,	"	85	1 05
WHISKEY, 1st pf. in bbls.	gallon.	28	29
" in hhds.	"	26	—
" wagon price,	"	—	—
WAGON FREIGHTS, to Pittsburgh,	100 lbs	1 75	—
To Wheeling,	"	1 50	—
		washed.	*unwash*
WOOL, Prime & Saxon Fleeces,	pound.	50 *to* 60	24 *to* 26
Full Merino,	"	40 50	22 24
Three fourths Merino,	"	35 42	22 24
One half do.	"	30 35	21 22
Common & one fourth Meri.	"	28 30	18 20
Pulled,	"	28 31	18 20

WOOL.

LYMAN REED & CO. Commission Merchants, No. 6 S. Charles street, Baltimore, Md.—devote particular attention to the sale of WOOL. All consignments made them will receive their particular attention, and liberal advances will be made when required. May 9.

SUBSCRIBERS can have their volumes of the AMERICAN FARMER neatly half bound and lettered at this establishment, at 75 cents a volume. Most of the Nos. can also be had at 10 cents each, to complete files.

BALTIMORE PROVISION MARKET.

	PER.	FROM.	TO.
APPLES,	bushel.	$0 45	$0 50
BACON, hams,	pound.	11	—
Shoulders,	"	—	9
Middlings,	"	—	10
BUTTER, printed, in lbs. & half lbs.	"	31	—
Roll,	"	12	20
CIDER,	barrel.	—	—
CALVES, three to six weeks old	each.	4 00	7 00
COWS, new milch,	"	15 00	27 00
Dry,	"	9 00	12 00
CORN MEAL, for family use,	100lbs.	1 62	1 75
CHOP RYE,	"	1 50	1 56
EGGS,	dozen.	9	—
FISH, Shad, trimmed		—	—
" salted,	barrel.	6 37	—
Herrings, salted, No. 1 & 2,	"	4 00	4 25
Mackerel, No. 1, 2 & 3,	"	4 00	—
Cod, salted,	cwt.	2 25	2 50
LAMBS, alive,	each.	1 25	2 00
Slaughtered,	quart'r	31	50
LARD,	pound.	8	—
ONIONS,	bushel.	—	73
POULTRY, Fowls,	dozen.	—	—
Chickens,	"	2 50	3 00
Ducks,	"	—	2 50
POTATOES, Irish,	bushel.	—	80
Sweet,	peck.	31	—
VEAL, fore quarters,	pound.	7	—
Hind do.	"	8	—

ADVERTISEMENTS.

A RARE CHANCE.

I HAVE the selling of an extensive list of Durham Short-horn Cattle, Bakewell Sheep, 2 thorough bred Fillies, and a valuable Boar, at prices lower than of any similar stock I have ever known offered in this country. I shall next week give a list comprising a minute description of *each animal* and its price. This stock will be for private sale until the next October races, over the Central Course, when all that may remain unsold will be offered at public auction. I. I. HITCHCOCK,
Sept. 9. American Farmer Establishment.

FARMERS are informed that ALVIN ARMSTRONG, the Patentee of LANE'S ENDLESS CHAIN HORSE POWER THRESHING MACHINE, is now in Baltimore, and will attend to selling this valuable Machine, either in single Machine, or by districts. Enquire at the American Farmer Office, No. 16 Calvert-street.
September 9.

SOUTH AMERICAN JACK AND JENNY FOR SALE.

ONE pair of young and in fine condition, lately imported at New York from Colombia, S. A. Apply at No. 5 Spear's wharf. sep 9

TALLAVERA WHITE WHEAT.

500 BUSHELS of this seed, grown, and particularly prepared, by Col Anthony Kimmel, Frederick County, Maryland, a sample of which may be seen at my store. For character refer to the American Farmer, (vol. 15, page 161.) Any quantity of which can be obtained about the first of September, by applying personally, or by letter, post paid, to

R. D. BURNS,
9 Bowly's wharf.

Price $1,80 per 60 pounds. Sep. 2.

A MALE FERRET,

IN fine health and condition, is for sale at this Establishment. Price $5. I. I. HITCHCOCK.

TWO VALUABLE SLUTS

ARE offered for sale, each about one year old. The first is a *Pointer* of the very best blood; color brown with some white. She may easily be broke this fall.

The other is out of one of the beautiful grey hound Sluts sent last year from Holland to the President of the U. S. by a fine pointer sent out with the greyhounds. The slut offered is a most beautiful black animal, very active, and appears to have the nose of the pointer with the speed of the grey-hound. Price of each $10. Apply to
aug. 26 I. I. HITCHCOCK.

A MARE IN EXCHANGE FOR CATTLE.

A GENTLEMAN of Virginia is desirous of exchanging a valuable blooded brood Mare for thorough bred Durham short horn Cattle—for sheep of the best blood, or for a good Jackass. Should any gentleman be disposed to make such a barter, he shall receive further information on application to I. I. HITCHCOCK,
aug. 12 Amer. Farm. Estab.

MORUS MULTICAULIS.

THE subscriber has on hand a few hundred of this celebrated Tree, unrivalled in the quality of its leaves as food for the silk worm, for which he is ready to receive orders (accompanied by the cash) with *particular* directions for the delivery of the trees on or after the first of Nov. next. Price 50 cents each, $5 per dozen, or $40 per hundred.

The success and ease with which this tree is propagated, the extraordinary quickness of its growth, the superiority of its leaves over *all* others for the silk culture, and its uncommon luxuriance and beauty, altogether recommend it to the favorable notice of *every farmer* as a most valuable acquisition. I. I. HITCHCOCK,
aug. 26. Amer. Farm. Establishment.

SEED WHEAT, RYE, &c.

THE subscriber offers his services for the procurement of Seed Wheat, Rye, &c. for those who shall provide funds in Baltimore for that purpose. He does not keep those articles on hand, and therefore can send them to those only who furnish him with the *means in advance.* For all such, however, he will use his best judgment to procure such grain as shall be ordered, charging a small commission for his agency. I. I. HITCHCOCK,
Amer. Farm. Estab.

Note—I. I. H. has made arrangements for procuring for cash, Seed Grain of the very first quality, from some of the best farms in Maryland. aug. 12

TURNIP SPINACH & CABBAGE SEED.

A FULL supply of these seeds of several of the best varieties for summer and fall sowing, now on hand and for sale by I. I. HITCHCOCK,
july 1 Amer. Farm. Estab.

SALE OF VALUABLE CATTLE.

THE subscriber intending to break up his Dairy Establishment, will offer at public sale on THURSDAY, the 12th of September next, at his residence near Brookville, Montgomery county, Md. his entire stock of COWS, amounting to 30 head. They are all of the improved Durham Short-Horned, crossed with the stock of the Oakes' Bull, which was raised by Mr. Oakes of Massachusetts, and got by the imported bull Coelebs, and was exhibited and took the premium at the Cattle Show near Baltimore, which was held at the house of the subscriber's brother, Wm. Frame, from whom he procured the young Oakes Bull. The cows are all in fine condition, and worthy the attention of improvers of stock.

Terms made known and atte. on given on the day of sale. DAVID FRAME.
aug. 26 2t

TERMS OF THIS PAPER.

1. Price five dollars per annum, payable in advance. ☞ When this is done, 50 cents worth of any kind of seeds on hand will be delivered or sent to the order of the subscriber with his receipt.

2. The *manner* of payment which is preferable to any other for distant subscribers, is by check or draft on some responsible party here, or else by remittance of a current bank note; and to obviate all objection to mail transmission, *the conductor assumes the risk.*

3. Subscriptions are always charged BY THE YEAR, and never for a shorter term. When once sent to a subscriber the paper will not be discontinued (except at the discretion of the publisher) without a special order, on receipt of which, a discontinuance will be entered, to take effect AT THE END of the current year of subscription.

4. Subscribers may receive the work either by mail in weekly numbers, or in monthly or quarterly portions; or else in a volume (ending in May annually), handsomely pressed, half bound and lettered (to match with the American Farmer) by such conveyance as they may direct: but the $5 must in all these cases be paid in advance.

☞ ADVERTISEMENTS relating to any of the subjects of this paper will be inserted once at one dollar per square, or at that rate for more than a square, and at half that rate for each repetition.

THE FARMER & GARDENER;

AND LIVE-STOCK BREEDER & MANAGER.

CONDUCTED BY I. IRVINE HITCHCOCK, AND ISSUED EVERY TUESDAY FROM THE AMERICAN FARMER ESTABLISHMENT, AT $5 PER ANNUM, IN ADVANCE.

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☞ This publication is the *successor* of the late
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(which is discontinued,) and is published at the same office, at five dollars per year, payable in advance.
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American Farmer Establishment.

BALTIMORE: TUESDAY, SEPTEMBER 16, 1834.

PATAGONIAN GOURD—On a visit to an agricultural friend in New Jersey last week, we were shewn a plant of the above name growing in his garden, which surpasses all the vegetables we ever saw for productiveness. Our friend informed us that he obtained and planted last spring *three seeds.* The quantity of vine and foliage is already prodigious, though apparently not yet near to its extent or maturity. The number of fruit was already very great, but the blossoms indicated that its bearing was only begun—certainly none of the gourds seemed near to their growth, though one of them hung from the vine, which had run over a fence, *full four feet long*, in the shape of a club. Our friend promised to send us one of the gourds when ripe. He understands that it is edible, being sliced and cooked like the egg plant. When we receive the one promised us we will speak further on the subject. *This* account is long enough, and it is not our fault if it is not *large* enough.

"SHOT WHEAT."—Many enquiries have been made at our office of late for Shot Wheat—an article introduced to the attention of the public by an *anonymous* writer in the Kittaning Gazette of (Pa.) who stated that the seed might be had in Baltimore. The editor of the paper above named has been called on for further information concerning this article, but has not, so far as we know, again mentioned it. From all the circumstances of the case we are led to suspect that the paragraph in the Kittaning paper is a hoax. No such article as Shot Wheat can be found or heard of in Baltimore. If the editor can give any information on this subject he will relieve much anxiety and enable us to answer enquiries more satisfactorily than at present.

Learn some useful art, so that you may be independent of the caprice of fortune.

For the Farmer and Gardener.

MR. EDITOR:—The account you have given in your paper, of the effects produced by the common practice of curing fodder, and especially the effects of steaming food for cattle, has been read by me with great attention; and it seems to come to the point which occurred to me some years ago; which, I will mention, after relating my manner of saving corn fodder.

I have for years been in the habit of saving my stalks by cutting them close to the ground, which may be done without injury to the grain, as soon as the husk on the corn has become dry; or on the approach of a frost that will destroy the blades. At such time, I have the stalks cut, and with the ears on, they are carried and set up in small shocks, which are tied near the tops with one or two stalks twisted together, to keep them from falling. These shocks being placed in straight rows through the field, the rest of the land may be ploughed and sowed—for I never sow among corn. The shocks may stand in this position, if desired, until after sowing is ended, when they are carried in, and the corn gathered into the crib.—The whole of the stalk and husk, I then have cut in a common cutting box, adapted to horse power, and fed to the cattle as wanted, which I find cattle will winter on as well as on the best of hay.

I will now relate the circumstance which this letter is intended to communicate. Some stalks which had been shocked in the manner mentioned, and had stood until they were pretty well dried, were taken in and cut in the box as usual.

In consequence of several days' rain, they were suffered to lie in a bin which was about six feet square, and eight or ten feet high, and was full of the cut stalks. When going to use some of them four days after they were cut, a board left to slide for the purpose, near the bottom of the bin, was drawn out, on which the smoke poured out of the space to such a degree as to induce the belief that the barn was on fire. The stalks which came out were quite black—some of them had undergone the putrefactive fermentation. All the mass was wet to dripping, and emitted a smell similar to that observed in a sugar house. The appearance of the stalks was such, that all thoughts of their being eaten was given over, and some of them were thrown out at the door. However, this opinion was soon found to be a mistake, for the cattle, directed by the sense of smell, were soon invited to the spot, where they were observed to be hooking and driving each other from the stalks, and catching a mouthful as they could, with an eagerness never shown for the best hay—their eagerness would not have been surpassed, if a cart-load of corn in the ear had been thrown to them. The rest of the cut stalks were spread, and when dried, were all eaten heartily by the cattle. Now sir, I should be glad to know if your science can account for the water which was found among the stalks—it could not have been imbibed from the air, for the box was air-tight, with the exception of a small opening in the top. The stalks were so dry, that had they been subjected to the pressure of a Burmah's press, I am sure there would not have been three gallons of water obtained from them; and they had the appearance of being soaked through and dripping with water. If steaming will have the same effect as this fermentation had, it will very much increase the value of food.

Yours, A FARMER.

Our correspondent, "A Farmer," has put our science to the test. We have neither room nor time, at present, to enter into an explanation of the facts contained in his most important and valuable communication. We often see essays in the several agricultural papers of the day, headed 'Agricultural Science,' and chemical essays on agricultural subjects, which we are always much pleased to see; those especially where the sermon which follows grows out of the text, and proves to be really scientific.

We have before given our theory applicable to the phenomena related in the communication of 'A Farmer,' and should be very glad to see some of our 'scientific farmers' take up this subject, and give us their theory—if ours is incorrect we should be glad to be set right.

MARYLAND HORTICULTURAL SOCIETY,
September 13, 1834.

Mr. Peter Coombs presented one bushel of Mercer potatoes.

Mr. T. Holmes presented seven varieties of exotic Grapes, viz. Parsely leaved Chasselas, Golden Chasselas, Bordeaux Purple, Black Prince, Tampraneau, red Chasselas, and Sultana, all fine specimens.

Mr. Robert Sinclair, sen. presented specimens of the Catawba, Bland and Isabella Grapes.

Mr. Geo. H. Keerl presented a specimen of the scarlet globe Dahlia.

Mr. Edward Kurtz presented a specimen of the purple globe Dahlia.

Mr. Robt. Sinclair, sen. presented a specimen of silver leaved Abele; a leaf 4 feet long of the Ailanthus, or Tree of Heaven; a sprig of Bignonia grandiflora; and the following Dahlias, viz. Lord John Russell, Lady Grantham, Theodore, Excellent Rose, and Arantia.

To be of noble parentage, and not be endowed with noble qualities, is rather a degradation than a glory.

THE FARMER.

Cornstalk Fodder.

In the last number was given an account of feeding milch cows with steamed corn-stalks ; and it will be observed, that the quantity of food which kept the cows in good milking order, was very small when compared with what is usually consumed in dry fodder. We had fed both cows and horses, on stalks cut fine in the same way, but had given them in a dry state, for several years before the steam was adopted ; but no comparison can be drawn, as to the saving of food by steaming from this trial, as the stalks had been given in waste. The mangers were filled, and when feeding time came, that which was not consumed was thrown under them for a bedding, no economy being necessary, as the stalks were plenty.

During the first year of feeding stalks in this way, we did not think of giving them to the horses, not yet having learned their value ; but on passing by the horses' stalls one day, with some cut stalks in a bushel, intended for a young Devon, some were thrown to the horses which were standing to clover hay—they eat the stalks very heartily, in preference, and from that time we have never fed a horse with hay.

One of the horses was driven into town twice every day; and that one had an allowance of grain —But the other two were only used occasionally, and had no grain, unless they were taken out to draw a load of wood or were driven to town in a carriage, when in such cases they had a small allowance of grain given them. The quantity of stalks they eat cannot be estimated, as they were given to them as to the cows, without reserve. Our horses never wintered better when fed on the best of clover or timothy hay.

The man who attended to feeding was an experienced feeder from England, and consequently, was very much averse to the innovation of old customs, but before the spring, he became convinced of the value of this food, and reconciled to its use. About 8 acres of corn, which produced from thirty-five to forty bushels of corn to the acre, furnished the stalks which were sufficient to keep ten milch cows, three horses and one young heifer for five months.

Our experience goes to confirm the idea, that the portion of cornstalk which is below the ear, and is suffered to be lost, in the usual way of saving fodder, is of more value as food and manure, than the portion which is usually saved ; and that this portion, which is left standing and is lost both as food and manure, is worth more, when properly used, than a crop of clover which the same ground would produce.

When it is taken into consideration the loss in the crop of corn by the present method of injudiciously mutilating the green stalk, which has been shown to amount to one-fifth of the whole crop of grain ; and, that the present practice involves a loss in the fodder which equals the whole produce of the land for one year when laid down in clover, it would be supposed this subject must recommend itself to the most inattentive farmer, if he has any regard to his own interest.

Agricultural Geology.—Geology, like its sister science, Geography, signifies a description of the earth. Though both these sciences describe the earth, both do not describe it in the same points. The one tells what the divisions of the earth are, the other what those divisions are composed of. Geography gives the names and situations of continents, islands and countries—Geology, the elements and varieties of earths and soils, which compose continents and countries. Geography describes the situation of mountains—and Geology describes the elements which compose rocks, and the strata of rocks which compose mountains.

As a prominent object of Geology is to describe soils, and point out the modes of improving them, it comes directly home to the interests of every farmer. As it is the simplest and most readily learnt of all the sciences, no farmer can plead the want of time or capacity for acquiring it. The winter evenings of one season are sufficient for any farmer to obtain a knowledge of Geology, which will be of the greatest benefit to him, and with it much other science of a kindred character.

Three minerals, called quartz, felspar and mica, compose a great part of the rocks, and a greater part of the solid upon our globe. If to these, lime and hornblind be added, we have the elements of more than nine-tenths, if not of ninety-nine hundredths of all the rocks, mountains and continents upon the earth.

Of the three first, all the rocks commonly called granite are formed. These rocks, as divided by Geologists, are called granite, gneiss, and mica slate. Granite is composed of quartz, felspar and mica, promiscuouely arranged, and frequently in large masses; the quartz and felspar especially, the former being in separate beds weighing tons. In some instances whole ledges, and even mountains, are formed almost wholly of quartz. Mica, (isinglass) in the oldest granite, is sometimes found in sheets of one or two feet in diameter.

Gneiss is little more or less than slaty granite, the mica running in one direction, causing it readily to split.

Mica slate, which is also a common language, classed among the granite rocks, is composed of two instead of three ingredients, the felspar being wanting.

Soils, though formed from rocks, and of course like them in their elements, are composed of still fewer ingredients, and are more readily understood. Quartz, felspar and lime, are the only essential mineral substances in soils, which, with various proportions of vegetable, and sometimes of animal matter, form the whole variety of soils, from the richest meadow to the most barren sand heap.

Such being the great simplicity of Geology, together with its intimate connexion with the farmers' interests, every intelligent and enterprising cultivator of soils must be glad to improve the first opportunity to form some acquaintance with it. This opportunity can be rendered by the Baltimore Union Lyceum, to farmers and other citizens, of any county in the states, who will be at the trouble of sending for sets of Geological Specimens, which the Juvenile Department of the Society have collected in sufficient quantities to supply the country. Already, this Juvenile Lyceum has collected quartz, felspar, mica, hornblind, lime, granite, gneiss, mica slate, sandstone, greenstone, and many other rocks and minerals, sufficient to furnish a set of specimens for every county in the Union.

This opportunity for acquiring useful practical knowledge, farmers through the country can avail themselves of, by attending Education Conventions, as proposed on the first Wednesday of November next. At these Conventions, measures can be taken in the most distant county to procure, not only specimens of Geology, but of other departments of nature, as also of the arts.—From Baltimore, Charleston, Cincinnati, Philadelphia, New-York or Boston, where provisions are made for sending specimens, they can be procured by any County Lyceum or County Conventions which shall make the request.

AGRICOLA.

Forest Trees.

To the Editor of the Farmer and Gardener :

What I am about to narrate, relates not to the cultivated field, the dairy, or the milch cow, but to *Nature's* husbandry ; not to Agriculture, but to Agriculture's elder sister: It asks at your hands the kind and respectful treatment, to which those claims entitle it.

My mind was long perplexed with the fact, that " where the oak has disappeared, after it had lifted its head to the springs of ages, another oak will not naturally rise, but some other tree." The same is equally true in relation to the chestnut, hickory, and many other trees. That the sycamore, the pine, or the maple, should seize upon the inheritance of strangers, may be accounted for—their seeds are winged by the Almighty, and prepared by Him, to take the wings of the wind; but that cannot be said, of the chestnut, hickory nut, or acorn. I believe the earth is filled with seeds almost indestructible in their constitution, ready to germinate whenever exposed to certain atmospheric action ;—but that, we know, is not the case as to the nuts already mentioned ; Nature uses them in no such way ; on the contrary the law which she imposes upon them is, *vegetate or not.* These considerations harrassed me for years, whenever the subject passed before my mind ; and the sight of a young growth of the class of trees last referred to, taking possession of soil, which had been occupied by those of a different family, " for time whereof the memory of man runneth not to the contrary," never failed to

suggest the interesting, but unanswered, and as I believed, unanswerable question, *Whence come these seedlings?* An occurrence a few years ago, removed all my difficulties upon the subject, and invited me to a field of speculation almost as interesting, as was that one enjoyed by St. Pierre, whilst observing his strawberry bush. The matter to you and your readers may seem not only unimportant but trifling:—I view it differently. I pretend to no profundity of skill in that particular department of science, whose responses about what I am writing would be considered oracular: "I am a plain blunt man that speaks right on that I do know," and draw conclusions for myself only, from premises of which I am in undisputed possession.

A few years since, a new road which I had laid out over a part of my farm, was much incumbered by the stump of a large purple mulberry tree, which however I did not cause to be removed, until it had exhausted my patience. Before a blow had been aimed at it by either hoe or axe, I discovered some green shoots along its sides, which upon examination, I found were mulberry cions of that year's growth: that interested me immediately in the condition of the stump, and induced me to attend particularly to its removal—When the work was done, (and it required many and hard blows to do it) I was astonished to find the roots in perfect health, full of sap, and able, as I believe, to sustain a tree as large as that one, which it had once borne—*that tree had been dead thirty years!*

I mentioned the fact to a strange friend of mine: I call him a *strange friend*, because he loves a pulley, a lever, or a cog-wheel, more than "wife or lawfully begotten children;" and would prefer the mazes of a mathematical solution, to all that blaze of beauty, which made the husband of Penelope unfaithful to his marriage vow. His character, however, has one redeeming feature: he loves nature, and delights to study her moods, He knew that I was incapable of misrepresenting, but that I might be mistaken—in short, he did not believe me, and so his manner told me. But very soon afterwards, conviction of the truth of my statement, was carried home to him, in a way which pleased me very much, for it humbled his pride—he is a botanist, and I had caught him napping.

In visiting one of his farms, he frequently passed a large mulberry tree, which died perhaps forty years ago,* and noticed a remarkably luxuriant growth among the branches of the old tree, which he supposed was Virginia Creeper, Poisonous Oak, or some other parasites. At length, however, he approached more nearly, and found the tree in the condition that I shall shortly endeavor to describe.

At our next interview, he mentioned what he had seen with all necessary humility, and proposed that we should visit the tree; which we did, after having procured (not one of 'Starks & Co's' axes, but) a small hatchet. We found nearly one half of the tree rotten; the hollow, occasioned by the decay, reaching the heart, and the bark which still remained on the sound part of the tree, sound only in stripes and spots. This describes the branches of the tree, as well as its body. The sap had recently ascended from the root, and stealing along between the bark and wood, wherever it could trust their soundness and adhesion, throwing out occasiocally through a hole in its covering, a vigorous twig, had gained the branches of the tree. Immediately on the top of the trunk, which was unusually flat, there was as thrifty a young mulberry as I ever saw;—its stalk was as large or larger than my wrist, and my limbs are more brawny I believe, than were those of him who slew Goliah. The dead limbs of the old tree, shaking young, and very large and green leaves, looked like extreme old age, decked out in all the follies of youthful fashion. Indeed the appearance of the tree was so extraordinary, that we intended sending a drawing of it to the American Farmer; but the departure from our neighborhood of the gifted young artist, upon whose pencil we relied, prevented the execution of our purpose. By the help of our hatchet, we traced the veins of ascending sap; and be it remembered, that that *ascent* was from *the root, between the bark, and the ligneous part of the tree.* It appears to me that this might incommode a very popular theory.

Some years since (I think it was in 1808) thousands and thousands of mulberry trees in this region, died, without any cause for it, known to us;—within the few years last past, myriads and myriads of cions of the same family have been taking their places. My opinion upon the subject is this: Some obstruction in the earth or air prevented the ascension of the sap from the roots to the trunks of the late growth of mulberry trees, and having no blood, they died;—that obstruction having been removed, the sap, which has remained in the roots of the old trees for that purpose, is now supplying us with a new stock of trees. And if the root of a mulberry tree, can retain its sap in life and health, for thirty years, prepared whenever Nature shall say "Now's the day and now's the hour" to send up, rear, and sustain another tree, may not the same policy imprison the sap, in the same way and for the same purposes for centuries? And if this be true in relation to the mulberry trees, may it not be equally true as to the oak, the chestnut, the hickory? I have no doubt of it.

That there shall be a rotation of crops, is a canon of vegetable life, which Nature always enforces in her own garden. That different classes of plants and trees, require different kinds of pabulum, there can be no doubt; and where Nature is not interfered with, or human beings are sufficiently intelligent upon the subject, that succeeding crops may restore to the soil peculiar properties withdrawn by their predecessors, is, I think, equally clear. This oak, with his thousand rootlets, feeds principally upon the soil; and after he has enjoyed it for centuries, he leaves it too poor to support a son or heir of his. The pine takes the place; and whether, by means of his tap-root, he draws supplies from depths to which the oak had never penetrated, or feeds upon the air which roars through his branches, is unimportant; he can live where the oak would starve; and not only can he live, but constantly enrich the soil which he overshadows. He will scarcely permit the sun to look at his territory; he dresses it richly, in his own "cast off garments;" he protects it from "summer's heat and winter's cold;" and when his life tenancy has expired, he dies full of honors, leaving the estate so much improved by his "musing," that an oak may succeed to it, and again waste it "in riotous living." Will that oak spring from an acorn? No; but from the old oak root, which has been waiting patiently, until the state of the times would justify the commencement of business afresh.

I am fully persuaded that when a forest has completed its rotation of crops, the soil is in as good condition, as when that rotation was commenced—that the same may be effected by a rotation of cultivated crops—and that the principle which directs the operations of Nature as to the alternations of her products, is the most important secret in agricultural improvement.

How perfect is the economy of Nature!—
As full as perfect in a hair, as heart;
As full as perfect in vile man that mourns,
As the rapt seraph, that adores and burns.

Not only may madness be charged upon the "undevout astronomer," but upon every intelligent being who does not see and acknowledge that "the rolling year is full of" God! But you shall not hear me moralize: and I leave you, asking forgiveness for such an outrageous trespass upon your time in behalf of an old mulberry stump! For no other reason, but that he loved one old mulberry tree dearly, do I venture to assume the name of WILL: SHAKSPEARE.

CHINESE MULBERRY.—The Mulberry seed, furnished to several persons in Massachusetts, by the Missionaries in China, have been extremely prolific, and the prospects are highly flattering for the manufacture of New-England silk. The following extract from an intelligent and enterprising gentleman in Northampton, received within a few days, will be read with interest.—"My prospects brighten every day, as it regards the silk business. I receive encouragement from every quarter.—Gentlemen of the first respectability, possessed of capital, are ready to engage in it. My trees have grown wonderfully. I shall sell twelve or fifteen hundred dollars worth this season, and shall propagate largely next season, if my life is prolonged. I wish you would come up here and settle yourself down. You will find it a delightful employment, to produce so rich a substance from the soil. It is a business which competition cannot affect, excepting for the better. For it is a fact that the more there are engaged in it, the better it will be for each one. The time is not far distant, when New-England will produce Silk equal in value to the Cotton of the South—of this no one can doubt, who has given any attention to the subject. I have already calls from gentlemen from every quarter, to see my trees and obtain information about the business. I am now planning a building to be erected the coming winter for the feeding of worms—two hundred feet long by twenty-four feet wide, two stories high—which I shall place below the garden next to the woods. I have sold one thousand trees to a gentleman for $250, and to others $500 worth more; my number will soon be taken up."—*Bost. Cour.*

* I knew a gentleman, who saw the sheet of lightning descend upon it, which split its trunk from top to bottom.

THE BREEDER & MANAGER.

[From the Farmers' Series.]

THE SHORT HORNS—A milch cow, good for the pail as long as she is wanted, and then quickly got into marketable condition, should have a long and rather small head; a large headed cow will seldom fatten or yield much milk. The eye should be bright, yet with a peculiar placidness and quietness of expression; the chaps thin, and the horns small. The neck should not be so thin as that which common opinion has given to the milch cow. It may be thin towards the head; but it must soon begin to thicken, and especially when it approaches the shoulder. The dewlap should be small; the breast, if not so wide as in some that have an unusual disposition to fatten, yet very far from being narrow, and it should project before the legs; the chine, to a certain degree fleshy, and even inclining to fullness; the girth behind the shoulder should be deeper than it is usually found in the short-horn; the ribs should spread out wide, so as to give as globular a form as possible to the carcase, and each should project farther than the preceding one to the very loins, giving, if after all the milch cow must be a little wider below than above, yet as much breadth as can possibly be afforded to the more valuable parts. She should be well formed across the hips and on the rump, and with greater length there than the milker generally possesses; or if a little too short, not heavy. If she stands a little long on the legs, it must not be too long. The thighs somewhat thin, with a slight tendency to crookedness, or being sickle-hammed behind: the tail thick at the upper part, but tapering below; and she should have a mellow hide and a little coarse hair. Common consent has given to her large milk-veins; and although the subcutaneous or milk-vein has nothing to do with the udder, but conveys the blood from the fore part of the chest and sides to the inguinal vein, yet a large milk-vein certainly indicates a strongly developed vascular system—one favourable to secretion generally, and to that of the milk among the rest.

The last essential in a milch cow that we shall mention is the udder, rather inclining to be large in proportion to the size of the animal, but not too large. It must be sufficiently capacious to contain the proper quantity of milk, but not too bulky, lest it should thicken and become loaded with fat. The skin of the udder should be thin, and free from lumps in every part of it. The teats should be of moderate size; at equal distances from each other every way; and of equal size from the udder to nearly the end, where they should run to a kind of point. When they are too large near the udder, they permit the milk to flow down too freely from the bag, and lodge in them; and when they are too broad at the extremity, the orifice is often so large that the cow cannot retain her milk after the bag begins to be full and heavy. The udder should be of nearly equal size before and behind, or, if there is any difference, it should be broader and fuller before than behind.*

* There are some doggrel lines, which so well express the great number of the good points of such a cow as we have been now describing, that we are tempted to copy them from the Farmer's Magazine:

'She's long in her face, she's fine in her horn,
She'll quickly get fat without cake or corn;
She's clean in her jaws, and full in her chine,
She's heavy in flank, and wide in her loin.

'She's broad in her ribs, and long in her rump,
A straight and flat back without ever a hump:
She's wide in her hips, and calm in her eyes,
She's fine in her shoulders, and thin in her thighs.

'She's light in her neck, and small in her tail,
She's wide in her breast, and good at the pail;
She's fine in her bone, and silky of skin—
She's a grazier's without, and a butcher's within.'

The quantity of milk given by some of these cows is very great. It is by no means uncommon for them, in the beginning of the summer, to yield 30 quarts a-day; there are rare instances of their having given 36 quarts; but the average measure may be estimated at 22 or 24 quarts. It is said that this milk does not yield a proportionate quantity of butter; and that, although these cows may be valuable where the sale of milk is the prime object, they will not answer for the dairy.

That their milk does not contain the same proportionate quantity of butter as that from the long-horns, the Scotch cattle, or the Devons, is probably true; but we have reason to believe that the difference has been much exaggerated, and is more than compensated by the additional quantity of milk. At the first introduction of the improved breed, the prejudice against them on this account was very great, and certain experiments were made, by the result of which it was made to appear that the milk of the Kyloe cow yielded double the quantity of butter that could be produced from that of the improved short-horn. Two ounces were obtained from the milk of the Kyloe, and one from that of the short-horn.

This aroused the advocates of the new breed, and they instituted their experiments, the result of which was much less to the disadvantage of the short-horns. Mr. Baily gives an account of an experiment made by Mr. Walton of Middleton.

He took from his dairy 6 cows promiscuously, and obtained the following quantity of butter from a quart of the milk of each of them:—

	oz.	*dwts.*
No. 1,	3	6
2,	1	6
3,	1	12
4,	1	10
5,	1	14
6,	1	6
	10	8

which, divided by 6, leaves nearly 1 oz. 14⅔dwts. or about 7-8 of the weight of butter from the same quantity of milk. Then, the increased quantity of milk yielded by the short-horn gave her decidedly the preference, so far as the simple produce was concerned.

This experiment brought to light another good quality in the improved short-horn, which, if not altogether unsuspected, was not sufficiently acted upon—that she improved as a dairy-cow as she got older. The cow, a quart of whose milk produced more than 3 oz. of butter, was six years old; the other five were only two years old; at all events the experiments proved that her milk was richer at six years old, than it had been at two. This is a subject which deserves investigation.

Another circumstance is somewhat connected with such an inquiry. The Kyloe and the long-horn cattle seem to care little about change of situation and pasture; but the short-horn is not so easily reconciled to a change; and her milk is not at first either so abundant or so good as it afterwards becomes.

A prejudice likewise existed, and perhaps does yet in the minds of some dairymen, against the larger improved short-horns. The breed generally are great consumers; and it was also supposed that, in proportion to the condition of the cow, she was likely to run to flesh instead of yielding milk, and therefore a rather small cow was selected, and one that did not carry about her many proofs of point.

That there is a great difference in the quantity of food consumed by different breeds of cattle, cannot be doubted; and that the short-horns occupy the highest rank among the consumers of food is evident enough; but we never could be persuaded that the difference of size in the same breed made any material difference in the appetite, or the food consumed. When they stand side by side in the stall or the cow-house, and experience has taught us the proper average quantity of food, the little one eats her share, and the larger one seldom eats more, even when it is put before her. There are occasional differences in the consumption of food by different animals, but these arise far oftener from constitution, or from some unknown cause, than from difference of size. Experience does, however, prove beyond the possibility of doubt, that the larger cattle, the breed and other circumstances being the same, yield the greatest quantity of milk.

Experience has also proved another thing,—that the good grazing points of a cow, and even her being in a fair store condition, do not necessarily interfere with her milking qualities. They prove that she has the disposition to fatten about her, but which will not be called into injurious exercise until, in the natural process of time, or designedly by us, she is dried. She will yield nearly as much milk as her unthrifty neighbour, and milk of a superior quality, and at four, five or six years old, might be pitted against any Kyloe, while we have the pledge that it will cost us little to prepare her for the butcher, when we have done with her as a milker. It is on this principle that many of the London dairymen now act, when they change their cows so frequently as they do; but whether this, even allowing the rapidity with which the beasts fatten, is the best and most profitable mode of management, will be the subject of future inquiry.

Some time after Mr. Walton's experiment, the following observations were made by Mr. Calvert, of Sandysike, near Brampton, on the quantity of butter yielded by one of his improved short-horns. The milk was kept and churned separately from that of the other stock, and the following is the account of the number of pounds of butter obtained in each week,—7, 10, 10, 12, 17, 13,

13, 13, 15, 16, 15, 12, 13, 13, 13, 14, 14, 13, 12, 12, 13, 11, 12, 10, 10, 8, 10, 9, 10, 7, 7, 7.

From this it appears that there were churned 373 pounds of butter in the space of 32 weeks. The cow gave 28 quarts of milk per day, about midsummer, and would average nearly 20 quarts per day for 20 weeks. She gave more milk when she was depastured in the summer than when she was soiled in the house, in consequence of the very hot weather. She was lame during six weeks, from 'foul in the feet,' which lessened the quantity of milk during that time; and the experiment was discontinued, because there was not a sufficient supply of turnips, and the milk of the whole of the herd was rapidly diminishing. For the first fortnight after calving, she was allowed a little broken corn; and from that period to the commencement of the turnip-season, she lived entirely on grass, with some cut clover, when it was necessary to shelter her from the inclement heat. The pasture was by no means of a superior quality.

After such a record—and it is far from being a singular one,—'there can be no doubt,' to adopt the language of the reporter, 'of the possibility of raising a breed of milking short-horns, which will surpass every variety of cattle in the kingdom.' We may, perhaps, safely add, that we have that breed, and that it only requires a little care in the selection, and in crossing, to perpetuate it.

We will take a very rapid survey of the few counties not already described, and in which the short-horns are the prevailing breed.

Cumberland—The native breed of Cumberland was a small long-horned beast, yielding a fair quantity of milk, and of good quality; answering well for the dairy, but not so profitable as grazing cattle. With these were intermingled the Kyloes and the Galloways, both of them quicker feeders than the old Cumberlands. They were generally bought in about October, and turned all the winter on the pastures out of which the fat cattle had just been sold—a little hay being allowed them, according to circumstances. They were kept about a twelvemonth, and paid very well.

The long-horns were most used for the dairy, and chiefly for the production of butter. They yielded from one to two firkins per annum, according to their goodness and size: the average produce was about 84lbs. per cow. Some of them would yield eight quarts of milk per day during the season, and three or four pounds of butter per week. The Cumberland butter used to be in considerable request. The cheese was an inferior article, and chiefly made of skimmed milk.

The short-horns were not slow in penetrating into Cumberland, and establishing themselves there. They were first used to cross the native and Scotch breeds, and sometimes with considerable success. Mr. Bates, of Halton Castle, attempted a cross between the Kyloe cow and the short-horn bull. His object was to increase the quantity of milk from the Kyloe, and to preserve its quality; and to gain that, which every one used to imagine the short-horn was sadly deficient in, hardiness. He hoped likewise to reduce the great consumption of food by the short-horn, and, at the same time, to retain his early maturity. To a very considerable extent he succeeded. Mr. Maynard, than whom there could not be a better judge of cattle, and from whose stock descended some of the best short-horns of the north, hired a bull from Mr. Bates, to try what effect would be produced on some of his own pure breeding stock. That the short-horns could be materially improved by such an admixture could scarcely be expected; but the value of the old breed of the country has been materially increased.

The pure short-horn is now zealously cultivated in Cumberland, and by none more so, or more successfully, than Mr. Maynard.

[From the London Lancet.]

LECTURES ON VETERINARY MEDICINE, *Delivered in the University of London, by Mr. Youatt.*—LECTURE IV—CONCLUDED.

The Schneiderian Membrane, as indicating Inflammatory Action in the Respiratory Passages.—The mucous membrane of the nose is distinguished from other mucous surfaces, not only by its thickness but its vascularity. The blood-vessels are likewise superficial; they are not covered even by integument, but merely by an unsubstantial mucous coat. They are deeper seated indeed than in the human being, and they are more protected from injury, and therefore there is far less hæmorrhage from the nostril of the horse than from that of the human being, whether spontaneous or accidental. Lying immediately under the mucous coat, these vessels give a peculiar, and to us a most important tinge to the membrane, and particularly observable on the septum. They present us with a faithful indication of the state of the circulation, and especially in the membranes of the other respiratory passages with which this is continuous.

We lack many of the auxiliaries of the human practitioner. Our patients are dumb; they can neither tell us the seat nor the degree of pain, and our blunders, unfortunately for us, sometimes, are never buried with the patient. Well, we must use greater diligence in availing ourselves of the advantages that we do possess, and we have some, and very important ones too. The varying hue of the Schneiderian membrane is the most important of all, and, with regard to the most frequent and fatal diseases of the horse, those of the respiratory passages, it gives us almost all the information with regard to the state of the circulation in those parts that we can possibly require. Veterinarians, too, generally overlook this. It has not yet been sufficiently taught in our schools, or inculcated in our best works on the pathology of the horse.

It is the custom with most veterinary surgeons, and almost with every horseman who will take any pains to ascertain for himself the state of his sick horse, to turn down the lower eyelid and to form his opinion of the degree of general inflammation by the color which the lining membrane of the lid presents. If it is very red, he concludes that there is considerable fever; if it is of a pale pinkish hue, there is comparatively little danger. Why, this is a very important examination, and the conclusion which we draw from it is generally true; but on the septum of the nose we have a membrane more immediately continuous with the membranes of the respiratory organs—more easily got at—presenting a larger surface—the ramifications of the blood-vessels better seen, and, what is truly important, indicating not only the general affection of the membranes, but of the membranes with which we are most of all concerned.

Let me urge you to attend more to this. Study the character of that portion of the membrane which covers the lower part of the septum; that which you can most readily bring into view.—Day after day, and under all the varying circumstances of health and disease, study it until you are enabled to recognise, and you soon will, and that with a degree of exactitude you would have scarcely thought possible—the pale pink hue when the horse is in health and quiet,—the increasing blush of red, and the general and uniform painting of the membrane, betokening some excitement of the system,—the streaked appearance when inflammation is threatening or commencing,—the intensely florid red of inflammation becoming acute,—the starting of the vessels from their gossamer coat, and then seeming to run bare over the membrane, when the inflammation is at the highest,—the pale ground with patches of vivid red, showing the half-subdued, but still-existing fever,—the uniform color, but somewhat redder than natural, indicating a return to a healthy state of the circulation,—the paleness approaching to white, indicating a state of debility, and yet some radiations of crimson, showing that there is yet much irritability, and that mischief may be in the wind,—the pale livid color warning you that the disease is assuming a typhoid character,—the darker livid announcing that the typhus is established, and that the vital current is stagnating,—and the browner, dirty painting, intermingling with and subduing the lividness, and telling you that the game is up.—Study these things, Gentlemen, they will be guides to your opinion and your treatment, which you can never too highly appreciate.

THE GARDENER.

[From Nuttall's Introduction to Botany.]

GENERAL COMPONENTS OF THE VEGETABLE STRUCTURE.—Vegetables, like animals, are composed of fluids and solids. The fluid parts produce those which are solid; and the only pabulum of plants being liquid, it is necessary that there should be an organic vascular system for its distribution, and that it should, no less, possess the vital power of assimulation, in order to supply the growth which takes place, and to diversify the products which characterise every species of perfected plants.

The general solid components of the vegetable system are: the *membranous*, the *cellular*, the *vascular*, and the *glandular textures;* the *ligneous fibre*, and the *epidermis.*

The general fluids are the *sap* and the *proper juice.*

I. OF THE SOLID COMPONENTS.—The first which we shall examine is the *membranous texture*, consisting of an exquisitely thin, transparent, colorless, film-like membrane or pelicle, found in every individual of the vegetable kingdom. The nicest microscopical examinations are unable to throw any light on its intimate structure, so that no appearances of organization

have yet been detected in it. It is that component of the vegetable structure, which constitutes its basis; or which in its lax state forms the cellular and the glandular textures and the epidermis; a little condensed it constitutes the vascular texture, and perhaps still more consolidated forms the ligneous fibre; so that it enters into the whole of the solid materials of the vegetable.

The *cellular texture* is formed from the membranous. It presents, in the parts of a plant where it is not compressed, the appearance of hexagonal cells, similar to the geometrical cells of a honeycomb, although sometimes of a longitudinal figure. Mirbel believed them to communicate with each other by means of pores and slits, about 300th part of a line in diameter; and that through those perforations, the vegetable juices they contain were slowly transfused. He asserts, also, that these pores are surrounded with borders; and that the perforations are few and scattered in the true hexagonal cells, but numerous and arranged transversely in regular series in the longitudinal openings. The membrane itself is so thin, that when examined through a microscope, with the light thrown obliquely upon it, it appears iridescent; but its organization is too minute to be determined by any magnifying power with which we are acquainted. When separated and put into water it very quickly resolves into a kind of mucilage, but in the living state resists the action of water with which it is often filled.

The cellular texture, in one form or other, enters into the composition of almost every vegetable organ. It is dry in some parts, but in other situations it receives fluids; and in it, principally, the various secretions of the plant are deposited. Thus, it is generally filled with mucilaginous, resinous, oily, or saccharine juices; but sometimes the cells contain air only. In the bark of plants the cellular texture is found immediately under the cuticle, filled with a resinous juice, which is of a different color in different species of plants, but most frequently green. In this situation it is the seat of the color of the bark, in the same manner as the *rete mucosum*, or reticulated capillary membrane situated under the human cuticle, is supposed to give color to the skin. The cells seem filled with the same green juice in leaves, which are composed of a layer of cellular substance placed betwixt two layers of cuticle. The medulla or pith of plants is, also, composed of these cells, filled in young and succulent plants and branches with water, or watery fluids; but in older plants, and in the trunks and branches of trees, not succulent, they are generally empty. In the latter the shape and structure of the cells are most conspicuous, and easily observed. Thus, if a transverse, or longitudinal section of a twig of *Spanish Broom*, in the second year of the growth of the twig, be placed under the microscope, or even a common lens, the pith of it displays the hexagonal cells, with the transparent iridescent appearance of the membrane forming their walls. It is well seen also by the aid of the microscope in the pith of many other plants. The petals of flowers are almost entirely composed of cellular texture, the cells of which are filled with juices fitted to refract and reflect the rays of light, so as to produce the brilliant and delicate tints with which the pencil of nature has embellished them. In the same manner it enters into the composition of the stamens, the stigma, and the pollen. The fleshy parts of succulent roots, and of pulpy fruits, are formed of this cellular texture filled with different juices according to their nature.

When the cellular texture is compressed, the cells nearly form parallelograms, as in the leaf-stalk of the Artichoke, in which they have a somewhat tubular appearance. The cells are proportionally more abundant in herbaceous plants than in trees; and in the younger than in the older branches.

Such is the appearance of the cellular texture. It enters as a component into almost every part of the vegetable structure. There are, indeed, some plants, as the Fuci and other marine vegetables which appear to be altogether composed of cellules.

The importance of the cellular texture, as being, probably, the elemental structure of the whole vegetable, has been already adverted to in our remarks on Vegetable Individuality. We shall now add some remarks on the functions of these *cellules*. Mirbel and others have asserted, that the cellules are formed merely by separating diaphragms, and that their parietes are common to each other, and form a sort of net-work through the vegetable. There is much better reason, however, to believe that these bodies are individually distinct, and only aggregated in masses so as to form the vegetable tissue. These vessels are of three kinds, round, oblong, and cylyndric; by boiling, the tubes and vesicles are readily separated wholly from each other, showing that each is distinct from the rest, though impressed by juxtaposition. They are entirely destitute of all visible pores, and have between their layers and bundles *intercellular spaces*, filled usually with air, and having commonly a communication with the cuticular pores. But it remained for Amici to discover the real functions of these vessels, and he has fully demonstrated that their parietes are filled with a *circulating* fluid, rendered visible as such by moving opaque globular atoms, floating in it and performing circuits of different degrees of velocity. In some the round was made in 30 seconds, in others only a third of that time was required to perform it. These moving atoms are green in the leaves, and give origin to their color; in the numerous and varied colors of petals, &c. they are of many other hues. The term *chromule* has lately been employed to designate this resinous coloring substance, which, though at first green in the leaves, in the autumn becomes red or yellow, and is then similar to what it is in the calyx and corolla so colored. After boiling the cellules, the *motory atoms* are still visible in all their original dimensions, but steeped in hot oil they disappear from the cells; they are also quickly disorganized in the growing plant, when salt or saccharine water filters into the vegetable; so that, though the cells have *no visible pores*, they are still capable of rapidly absorbing fluids.

The floating atoms, after performing their round of circulation, become fixed to the sides of the cells, and at length the vessels, clogged with these bodies, must become opaque and turgid with matter so as to assist in forming the massive solids of vegetable bodies. The appearance of these globular atoms, imperfectly examined, led to the belief that these cellules were porous, a fact wholly at variance with the closed circulation carried on in their parietes.

These cells and tubes generate others from their sides and bases. Amici observed in *Chara* the progressive formation of a perfect vesicle at the base of a young branch with three internodes of cells. In the first a rapid circulation was visible; a more languid motion existed in the second; while the third only exhibited a transparent vesicle with some *immovable* rudiments only of motory globules; but after a while the whole attained a perfect and equal motory developement.

[From the Gardener's Magazine.]

A successful Mode of securing a Crop of Fruit on Pear Trees. By Mr. B. Saunders, Nurseryman in the Island of Jersey.

Sir.—The fact that many disappointments are experienced by gardeners, and also by amateurs, in their endeavor to procure crops of many fine sorts of pears, is so well known, that it needs only to be mentioned to be assented to. The practical application of the following suggestion will, however, remove, in many instances, these disappointments, and insure good crops.

There are many varieties of pears, which, every year, blossom very abundantly; and yet, to the great disappointment of the cultivator, the whole of the flowers fall off without sitting a single fruit, although the soil and situation may be very congenial, and every care has been taken in planting, &c. This is the case with the Duchess d'Angouleme, and with many others I could mention. The trees of these varieties, according to my observations, devote the whole of their strength and sap to the production of a superabundance of blossoms; but, unless they are assisted by art, they have not sufficient strength to set their fruit. In order, then, to remedy this defect, and to assist nature as much as possible, I have adopted the following plan, with great success and satisfaction, for the last three years:—

Take a pair of scissors (such as are used for thinning grapes,) and go over the corymbs of flowers, or rather of flower-buds, as soon as they are sufficiently elongated to allow the points of the scissors to pass between them (that is, some days before the blossoms are expanded,) and thin them; leaving only five or six blossoms in each, according to the size of the corymb: always preferring to leave the flowers which have the stoutest stalks, and those which are nearest the centre. This operation has the effect of diverting the sap to the flowers which remain, and gives them sufficient strength to set from one to three fruits in each umbel; which will prove a sufficient crop, and will repay the labor bestowed. Another mode, less tedious than the above, is also practised here, with success, on young trees. It consists in deferring that part of the pruning of them which is termed shortening the young wood, until the blossoms are in about the same state as is described in the above directions for thinning, and then shortening them back to the required length.

This also checks the progress of the sap, and enables the tree to set fruit very freely. I am aware that my plan is a tedious one, and one that is almost impracticable on a large scale; but it is decidedly an excellent plan for dwarf trees in gardens, whether they are cultivated in the *quenouille* mode, against walls, or as espaliers; as these trees come within the reach of the hand, of a pair of steps, or of a ladder. In the hope that these remarks may, through your indulgence, avail my fellow-laborers in horticulture, at the coming season, I am, Sir, yours, &c.

BERNARD SAUNDERS.

Nursery, Island of Jersey, Dec. 6, 1833.

We recommend the above article to the particular attention of young gardeners. The system of disbudding advised in the preceding paper by Mr. Callow, and that of thinning out blossoms suggested in the above paper by Mr. Saunders, are applicable to all fruit trees; and, if generally adopted, would insure important results. We know an instance of a large apple orchard, the property of a commercial gardener in Kent, in which a knife has never been used: every thing is effected by disbudding, and pinching out young wood with the finger and thumb. The proprietor is not a scientific gardener; and he adopted the above practice from no particular theory, but simply from his own observation and experience, to save labor, and to insure good crops of large fruit. We hope to see his orchard next summer, and to report on it.—*Cond.*

[From the Gardeners' Magazine.]

On taking up the Roots of the Scarlet Runner in the Autumn, preserving them through the Winter, and replanting them in Spring—By Mr. JAMES CUTHILL, Gardener to Lawrence Sullivan, Esq. Broom House, Fulham.

I have made a discovery, with respect to the scarlet runner, which, I am told, may prove of some consequence both in the management of gentlemen's gardens, and those of cottagers.

In the month of November last, when digging the ground where the crop of runners had grown, I could not help noticing the large size of the roots; and it occurred to me that, if I took them up, potted them, and kept them in a cold pit during the winter, they might furnish another crop the following spring. I tried the experiment on two of the best roots, potting them, and keeping them in a cold pit till the 1st of February. At that time I put them into a hot-house, in which the average temperature was about 60°. They soon began to send up strong shoots, and to show flower in abundance from the ground upwards. They are now about 12 ft. high, and make a very good appearance in a green-house, where they pass with many for a new species of plant.

If I had saved thirty or forty roots, and had put them in heat in spring, in the manner done with georginas, and if I had turned them out in the open air about the same time that these plants are turned out, I certainly should have been able to gather kidney beans a month sooner than is done by the usual practice of sowing in the open garden.

In cottage gardens, the roots might be taken up every autumn, and preserved in the same way as those of potatoes; and, by being planted on a fresh piece of ground in spring, they would not only produce a much earlier, but a much more abundant crop than one raised from seeds.

Fulham, May 10, 1834.

MONTHLY STRAWBERRIES.—Mr. John Cowles of this village, has a small bed of monthly strawberry vines, from which he now picks daily ripe berries. Two or three roots were presented to him last autumn; he put them in a box, and kept them in his house during the winter, and in the spring transferred to his garden. They have borne every month since he has had them, except February; and from two or three roots have spread to a bed of two feet square. The berries are very large, and the flavor delicious. We saw the bed last week: the blossoms were very full upon it, young berries set in great numbers, and ripe ones on the stems. Monthly Strawberries may be quite common to our readers, but these are the first we have ever seen. A notice was recently published in the New York Commercial Advertiser, stating that a gentleman in New-Haven had a large bed of them, and was able to send to market every morning quite a quantity. If they are not common, they are worthy the attention of horticulturists, for the vine appears to bear with more exuberance than the common vine.—To have berries every month in the year—or eleven months of the twelve—of the finest flavor which the palate can receive, would be to us very desirable.—*Poughkeepsie Telegraph.*

MISCELLANEOUS.

[From the Farmers' Register.]

IMPROVED BEE-HIVE.—The box or hive to be made of inch plank—say about 2 feet 3 inches by 12 inches wide—the upper part of the box to be partitioned off, allowing just space sufficient to admit of a drawer of about 10 by 12 inches deep. This drawer is to slide upon the horizontal position, and to be made to fit the inside of the box exactly. In the bottom of the drawer, a hole is to be made, say about one and a half inch in diameter, and a corresponding one in the partition, so as to allow the bees to pass up from the lower part of the hive into the drawer. In the outer side of the drawer, a pane of glass is to be fixed, to ascertain when the drawer is filled with honey. Over the glass, a sliding shutter is to be placed, to exclude the light: or the upper end of the plank, forming the back side of the box or hive, may be sawed off, and fastened with a hinge and button, so as to answer the place of the sliding shutter. When the honey is wanted for use, remove the shutter from before the glass, and having ascertained the drawer is filled, introduce a little smoke into the top of the drawer by means of a tobacco pipe; and when the bees have been driven into the lower part of the hive, separate the drawer and partition, with a case knife, remove the drawer, and having emptied it, return it to its place again, and the bees will commence working in it immediately. By this method the honey will be always pure, without bee-bread or dead bees, and not a single bee need be destroyed; and moreover, it has been tested by many years trial, and found to answer the intention completely.

P. S.—The drawer should have a top screwed on, so as to be more readily opened when the honey is to be taken out; and any space between the drawer and the sides, or the top of the hive, should be filled by some kind of cement, so as to prevent insects from making a lodgement within the hive. Z.

Steam-Boiler.—This is an implement that no Farmer or Planter should be without, as potatoes, particularly, are nearly double in value, for feeding and fatting, when boiled. Turnips and other roots, and pumpkins, are also much improved, as food for cattle, by a similar process.

Boiled clover-hay is found very good for keeping Swine, during winter; and we are of opinion, that if fed to Milch-cows, during that season, it would greatly improve the quantity of their milk, and keep them in better order, than when fed dry to them. We believe this to be well worthy of a fair experiment, by having a vat, or box, to hold the hay sufficiently large for the purpose.

MELONS.—A French periodical gives the following method of hastening the ripening of melons. Spread on the melon and round it a thick couch of from one to two inches of pounded charcoal. Lampadius tried this plan at Frieburg in 1813, and succeeded in making melons ripen in a box of earth in the open air, during the summer of that year, in the mining district of Saxony. The surface of the earth thus covered with charcoal had at noonday a temperature of 37 50 to 47 50 of Reaumur, while at the same time the thermometer in the shade was only at from 15 to 20, and in the sun at 25 to 37 50.

The late Admiral Sir H. Blackwood when an unemployed Lieutenant, at the outbreak of the revolution, went to Paris. He was requested by some friends to take charge of a small parcel which on his arrival in that city was seized and found to contain letters. Blackwood was immediately committed to prison; but, it appeared on examination that the letters were not of a political nature, he was taken before the Municipal Council, and it was asked of him whether he could find any responsible person, who could be security for his appearing before the Convention, to which the business was referred. "With my head I will go bail for Mr. Blackwood," said M. Lafitteau, "I know him, and he is a man of honor." When this unpleasant affair was settled, and Blackwood was about to return, he requested to know of M. Lafitteau how he could evince his gratitude. "By sending me a pair of English leather breeches," was the reply, and it was of course faithfully done.

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BALTIMORE PRODUCE MARKET.

☞ *These Prices are carefully corrected every* MONDAY.

	PER.	FROM	TO
BRANDY, Apple,	gallon.	$0 27	$—
Peach,	"	—	—
BEANS, white field,	bushel.	—	—
BEEF, on the hoof,	100lbs.	4 00	5 00
CORN, yellow,	bushel.	66	68
White,	"	68	69
COTTON, Virginia,	pound.	—	—
North Carolina,	"	11	13
Upland,	"	14	15
FEATHERS,	pound.	—	37
FLAXSEED,	bushel.	1 00	1 25
FLOUR—Best white wheat family,	barrel.	6 50	7 00
Do. do. baker's	"	6 00	6 50
Do. do. Superfine,	"	5 00	5 25
Super Howard street,	"	5 12	5 31
" " wagon price,	"	5 00	5 25
City Mills, extra,	"	5 25	5 37
Do.	"	5 00	5 25
Susquehanna,	"	5 25	—
Rye,	"	3 37	—
GRASS SEEDS, red Clover,	bushel.	4 50	5 00
Timothy (herds of the north)	"	3 00	—
Orchard,	"	3 00	—
Tall meadow Oat,	"	2 50	—
Herds, or red top,	"	1 25	—
HAY, in bulk,	ton.	—	13 00
Pressed,	100 lbs	—	90
HEMP, country, dew rotted,	pound.	6	7
" water rotted,	"	7	8
LIME,	bushel.	30	35
MUSTARD SEED, Foreign,	"	4 50	5 00
Domestic,	"	5 00	—
OATS,	"	29	30
OIL, linseed,	gallon.	—	90
Castor	"	1 70	1 80
PEAS, red eye,	bushel.	—	—
Black eye,	"	—	—
Lady,	"	—	—
PLASTER PARIS, in the stone,	ton.	2 75	—
Ground,	barrel.	1 37	—
PALMA CHRISTA BEAN,	bushel.	2 00	—
RAGS,	pound.	3	4
RYE,	bushel.	62	—
TOBACCO, crop, common,	100 lbs	3 50	5 00
" brown and red,	"	4 50	6 00
" fine red,	"	6 00	8 00
" wrappery, suitable for segars,	"	6 00	12 00
" yellow and red,	"	8 00	12 00
" yellow,	"	13 00	17 00
" fine yellow,	"	15 00	22 00
Seconds, as in quality,	"	4 00	5 00
" ground leaf,	"	5 00	9 00
Virginia,	"	4 00	—
Rappahannock,	"	3 00	4 00
Kentucky,	"	4 00	8 00
WHEAT, white,	bushel.	1 08	1 12
Red,	"	95	1 06
WHISKEY, 1st pf. in bbls.	gallon.	28	29
" in hhds.	"	26	—
" wagon price,	"	—	—
WAGON FREIGHTS, to Pittsburgh,	100 lbs	1 75	—
To Wheeling,	"	1 50	—
		washed.	*unwash*
WOOL, Prime & Saxon Fleeces,	pound.	50 *to* 60	24 *to* 26
Full Merino,	"	40 50	22 24
Three fourths Merino,	"	35 42	22 24
One half do.	"	30 35	21 22
Common & one fourth Meri.	"	28 30	18 20
Pulled,	"	28 31	18 20

FARMERS are informed that ALVIN ARMSTRONG, the Vender of LANE'S ENDLESS CHAIN HORSE POWER THRESHING MACHINE, is now in Baltimore, and will attend to selling this valuable Machine, either in single Machine, or by districts. Enquire at the American Farmer Office, No. 16 Calvert-street.
September 9.

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BALTIMORE PROVISION MARKET.

	PER.	FROM.	TO.
APPLES,	bushel.	$—	$0 40
BACON, hams,	pound.	11	—
Shoulders,	"	—	9
Middlings,	"	—	10
BUTTER, printed, in lbs. & half lbs.	"	31	—
Roll,	"	12	20
CIDER,	barrel.	—	—
CALVES, three to six weeks old	each.	4 00	7 00
COWS, new milch,	"	15 00	27 00
Dry,	"	9 00	12 00
CORN MEAL, for family use,	100lbs.	1 62	1 75
CHOP RYE,	"	1 50	1 56
EGGS,	dozen.	9	—
FISH, Shad, trimmed		—	—
" salted,	barrel.	6 37	—
Herrings, salted, No. 1 & 2,	"	4 00	4 25
Mackerel, No. 1, 2 & 3,	"	4 00	—
Cod, salted,	cwt.	2 25	2 50
LAMBS, alive,	each.	1 25	2 00
Slaughtered,	quart'r	31	50
LARD,	pound.	8	—
ONIONS,	bushel.	—	73
POULTRY, Fowls,	dozen.	—	—
Chickens,	"	1 75	2 00
Ducks,	"	—	2 50
POTATOES, Irish,	bushel.	—	80
Sweet,	peck.	31	—
VEAL, fore quarters,	pound.	7	—
Hind do.	"	8	—

ADVERTISEMENTS.

A RARE CHANCE.

THE subscriber has the selling of the following Stock, at prices lower than of any similar stock he has ever known offered in this country. These animals will be for private sale, at the annexed prices, until Saturday, the 25th day of October, (the day after the termination of the Baltimore races), when all that may remain unsold will be offered at public auction. It is probable that many other animals will be added to the sale, of which due notice will be given. The subscriber has recently inspected every individual comprised in the following list, and therefore pledges himself that they will be found to answer the description here given. They are numbered, for convenient reference. Gentlemen wishing to improve their stock are not likely to have frequently such opportunities for doing it as the one now offered them.

Thorough-bred Durham Short-Horns.

No. 1—A Bull, about 18 months old, dun and white, of good size, and very handsome. This is a valuable animal. Price $200.

No. 2—A Heifer, about 18 months old, red and white, of good size, and very handsome She is in calf to a thorough-bred bull. Price $150.

No. 3—A Heifer, of same age and description in *all* respects as No. 2, and same price. She is a great beauty.

Calves.

No. 4—A white Bull.
5—A dun and white do.
6—A red and white do.
7—A red and white Heifer.
8—A white Heifer.

These are all calves of 1834, of the same stock as the above described, and equally promising. Prices from $80 to $120 each.—Each of the above animals will be sold with a well authenticated pedigree of pure blood.

No 9—A Heifer Calf, red and white.
10 do. do. do.

These two calves are of the same stock as those previously described, and equally handsome, but the pedigrees of their dams being lost, they will be sold without pedigrees, though they are *known* to be thorough-bred. Price $50 each.

No. 11—A thorough-bred bull, about 15 months old, red and white, of good size and form—a very valuable animal. He was bred by a gentleman of Philadelphia, who has imported a few thorough-bred cattle for his own use, but as he does not deal in them, he keeps no written pedigrees of his stock. His certificate, however, which will accompany the bull, is a sufficient guarantee of the purity of his blood. The brother of this bull, 3 years old, was sold this summer by John Barney, Esq. for $300. This will be sold for $200.

Alloyed Durham Short-Horns.

The following, though not thorough-bred, are (several of them) very fine animals.

No. 12—A three-fourths blood Bull, nearly white, two years old in May last—very large—was got by Hector, a thorough-bred bull, raised by Mr. Powell, out of a fine half-blood cow. Price $100.

No. 13—A seven-eighths blood Bull, red and white, two years old in July last, of middling size, and very handsome—got by the celebrated thorough bred bull Bolivar, out of a three-fourths blood cow. Price $100.

No. 14—A three-fourths blood Bull, red and white, one year old—got by Bolivar, out of a half-blood cow. Price $75.

No. 15—A fifteen-sixteenths Bull Calf, five months old, white and red—got by Apollo, (thorough-bred) out of a seven-eighths blood cow. He is a calf of extraordinary beauty, and great promise. Price $75.

No. 16—A seven-eighths Cow, (the dam of No. 15), a fine breeder, for which alone she has been kept. She is 10 years old, in good health and condition, and is supposed to be in calf by No. 12 or 13. Price $50.

No. 17—A three-fourths blood Heifer, 3 years old, white—got by Bolivar, out of a half-blood cow. She is small, but very handsome. She has had one calf, and has proved herself a fair milker, and is in calf now to No. 12 or 13. Price $75.

Sheep.

No. 18—A Buck, of the New Leicester or Improved Bakewell breed, two years old—a good animal. Price $50.

No. 19—A Buck, of the Cotswold breed, two years old; a valuable breeder. Price $50.

No. 20—A Buck of last spring; pure Improved Bakewell breed—very large and likely. Price $50.

No. 21—Twenty Bakewell Ewes, of pure blood, but having been kept not quite in Barney's style, are not first rate, except in blood. They will be sold for $20 to $25 each.

Boar.

No. 22—A fine Boar, 7 months old, a cross between the two celebrated breeds known as the Mackay and the large spotted Woburn or Duke of Bedford breed. He is a remarkably fine hog, and will be sold for $20, not less.

Fillies.

No. 23—A pair of very beautiful sorrel Fillies, one year old, remarkably well matched, thorough bred—pedigrees and prices shall be furnished on request.

Address I. I. HITCHCOCK,
American Farmer Establishment,
Who has for sale Devon Cattle of pure blood, at very low prices. Sept. 16.

100 Bushels of PEACH STONES WANTED, or any less quantity, for which a fair price will be paid at this Establishment. Sep 16.

WANTED,

AT the American Farmer Establishment, ORCHARD GRASS SEED, for which the highest price will be paid; also, CLOVER SEED and TIMOTHY SEED will be either bought or sold on commission, by
Sept. 16. I. I HITCHCOCK.

FINE GEESE.

FOR sale at this establishment, a GANDER and two GEESE of extraordinary size. They are believed to be a cross of the large Bremen goose upon the grey goose. Their color is grey and white. The person from whom they were procured, assured us that individuals of this breed, have been fattened to weigh as high as 25 pounds. Price $5 for the three. Sept. 16.

NEWFOUNDLAND PUPPIES.

SEVERAL fine DOG PUPPIES of this variety, the produce of a very valuable pair, recently procured from Philadelphia—may be had at $10 each, on application to I. I. HITCHCOCK,
Sept. 16. American Farmer Establishment.

PIGS OF THE BARNITZ BREED.

ABOUT the 25th inst. I shall be ready to deliver a few of these celebrated pigs at $5 each. Those whose orders are on register will have preference, but it is probable that after supplying them, a few will remain for sale. I. I. HITCHCOCK,
Sept. 16. American Farmer Establishment.

THE FARMER & GARDENER;

AND LIVE-STOCK BREEDER & MANAGER.

CONDUCTED BY I. IRVINE HITCHCOCK, AND ISSUED EVERY TUESDAY FROM THE AMERICAN FARMER ESTABLISHMENT, AT $5 PER ANNUM, IN ADVANCE

No. 21. **BALTIMORE, SEPTEMBER 23, 1834.** **Vol. I.**

☞This publication is the *successor* of the late

AMERICAN FARMER,

(which is discontinued,) and is published at the same office, at five dollars per year, payable in advance.

☞When this is done, 50 cents worth of any kind of seeds on hand will be delivered or sent to the order of the subscriber with his receipt.

American Farmer Establishment.

BALTIMORE: TUESDAY, SEPTEMBER 23, 1834.

"STRAYED OR STOLEN," several of our paragraphs, and even some "pretty considerable" articles. They have frequently been seen in the premises of some of our editorial brethren, but without our mark. Whether they break into those premises, or are enveigled or filched, we know not—but one thing we have observed with some emotion, that some of them are travelling about with sundry *false* marks attached to them. We respectfully request that they may be branded with the words "Farmer and Gardener," and then we care not whither they travel. The last one we noticed thus disguised, was one headed "GEOLOGY." It was last seen in the New-England Farmer, branded, "*New-York Courier and Enquirer*."

GAMA GRASS.—We take pleasure in laying before our readers the following letter from our subscriber, on the interesting subject of the Gama Grass. He is a close observer, and his opinions are entitled to high consideration; but he does not speak *decisively* in regard to the value of this grass, further than he has tried it—we hope to hear from him again on the same subject, next season. Our own opinion, derived more from information than from experience is that its greatest value will be found to consist in its capacity to grow *where* and *when* other grasses will not—on sandy soils, such as the pine barrens of Carolina, and in seasons of drought, when other grasses would be destroyed. We believe that for these purposes and under these circumstances it will be found invaluable—provided it be cut often, while the leaves are succulent and tender. We have a bed of the young plants of last spring's sowing, and can say they have withstood the late drought astonishingly. By the way, the first paragraph of this letter is not the least interesting part of it.—It is indeed *monster*-ous gratifying—wonder if *some* who read it will take a hint.

HENRY COUNTY, GEORGIA, *McDonough, Sept. 4th* 1834.

Mr. I. I. HITCHCOCK:—

Sir,—I enclose you a five dollar United States bill, the subscription for the *Farmer* and *Gardener*, the present year.

I have observed your frequent notices of the gama grass, and much fear that many will be disappointed on a *fair* trial.

Last November I transplanted a fourth of an acre of the roots, and in March the same quantity. Those I put out in March are far more thrifty than the plants set out in the fall—but all will nearly cover the ground the ensuing year. The roots are planted in rows 2 ft. apart, and the distance between the plants 18 inches. Two feet each way would do better. But I fear we shall be disappointed in the *quality* and *quantity* of the hay, although I have never anticipated so great a yield as many have. But the appearance of the young grass indicated a coarseness, not indicative of a superior food for cattle or horses. How this may be altered for the better, when the roots the ensuing year shall be sufficiently set to enable me to cut the grass once a month, I shall not until then attempt to determine—as my present opinion is not founded on proof positive, but rather on appearances—and as I fear the worst—so I shall be the more gratified if the grass succeeds well—at all events you shall hear from me, when I have confirmation by experience on the subject.

Our corn crops have come in finely, and we have abundance.—Of cotton I cannot speak so favorably. The drowth that has set in since our corn has been made, has proved very injurious, and our most intelligent planters fear we shall not obtain a half crop.

In haste, repectfully yours,

AMASA SPENCER.

Mr. HITCHCOCK.—In the American Farmer for March 15, 1833, I see an account of a Knitting Machine, from Huntingdon County, Pennsylvania. I will be glad to be informed if the machine has succeeded, and how it can be procured.—Perhaps some of your readers may be able to give me this information, and soon as convenient, for in a cold day, I find the possession of a pair of good SOCKS, of more consequence to me, than the settlement of the "deposite question," or even "nullification." The crops of corn and cotton in South Alabama, have not been equalled perhaps in the memory of the oldest inhabitants.—The country is very healthy—so far. A READER.

Alabama, 18 August, 1834.

[We well remember the ingeniously contrived machine above mentioned, but know not where it can be procured.—Can any of our readers give the information?—EDITOR.]

EAGLE BALANCE.

Mr. T. M. MOORE, publisher of the Philadelphia Price Current, has invented a very neat little balance, by which counterfeit half and quarter eagles may at once be detected, whether their variation from the genuine be in size or weight, or both. It is infallible, and deserves attention. The balance is strong, not liable to get out of repair, and is as portable as a piece of tobacco.

In North Carolina, the late drought has been succeeded by heavy falls of rain. The Raleigh Register of the 3d instant states that that section has been visited by the most destructive fresh ever known there.—Scarcely a mill or bridge was left standing, as far as accounts from the surrounding country had then been received, and the injury done to crops and stock was immense.

MARYLAND HORTICULTURAL SOCIETY,

September 20, 1834.

Mr. Edward Keen exhibited one hundred pickling cucumbers of the genuine long green variety: they were very superior.

We omitted last week, accidentally, to notice two varieties of corn presented by Henry Schroeder, Esq.; one was the kind sometimes called popcorn, large, and of luxuriant foliage; the other bears from six to eight ears on each stalk, in clusters, 2 or 3 in each; they are both considered valuable varieties.

Joseph King, Jr. presented a boquette of China asters, verbena melindrés, phlox accuminata, plumbago capensis, cobea scandens, double white althea, double flowering myrtle, &c.

CHEMISTRY.

Mr. Editor:—A gentleman came to my house to spend a night with me. I put a spoonful of wheat flour and a spoonful of inferior brown sugar in my marble mortar and stirred them well together, and next morning desired his opinion what it was, he examined and pronounced it sugar of a superior quality. When informed that it was half flour he could scarcely believe it, but wanted to know if a better judge would be deceived in the same way; another spoonful of each was prepared in the same way, and carried twenty odd miles to a man whom he knew to be a very good judge; he also pronounced it very superior sugar. Such is the fact, that one spoonful of flour and one of sugar, thus prepared will taste and look exactly like sugar; and that if the sugar was rether dark colored, it will improve the looks; not only so, it will sweeten as much coffee as two spoonfuls of sugar; in fact it will be two spoonfuls of sugar.—*Southern Planter.*

THE FARMER.

Improving Land by Ploughing in Old Sedge.—We have had two letters on file for some time, from a much valued correspondent in Montgomery county, Dr. Thos. Patterson. We have been obliged to postpone attention to them because, from the importance of their contents they required more time than we could before allot to their due preparation. We should give these letters entire but for their being partly on business. We therefore make a summary of their valuable contents, exhibiting an outline of the writer's practice, which we deem worthy of imitation.

Dr. Patterson says (in July) he has the promise of 40 bushels of corn to the acre on about 12 acres, improved by ploughing-in old sedge alone, and this is the mode of his culture. He turns under the broom sedge, &c. in the fall and winter, and plants his corn in the spring without disturbing the undecomposed vegetable matter under the furrow. He tills his corn lightly, being careful through the process not to disturb the bed of vegetable matter beneath. This is wise; the vegetable matter turned under in the fall is undergoing the process of decomposition through the time that the roots of corn are expanding in search of food.

This gentleman has embraced the very essence of scientific agriculture. The season of the year in which the ploughing under of the sedge was performed, was after the plants had come to perfection; and consequently, the sap of the plant had become a concrete, woody fibre. We have heretofore shown, that woody fibre is nothing more than a concretion of oxygen, hydrogen, and carbon, changed from a gaseous to a solid form; the desideratum now is to disengage these primitive agents from their close adhesion in the stems of the old sedge, and to dissolve them in caloric, that they may, in their original gaseous form, renew their perpetual round in another form. This purpose can be effected but in two ways, either rapidly by ignition, or more slowly by fermentation. If the former method be adopted, and the sage be burned off the ground, as the shortest way, which is the usual practice of farmers, then the gases generated in the process are dispelled through the general mass of the atmosphere. On the contrary, when the sedge is carefully turned under the soil, as is judiciously done by our correspondent, and permitted there to undergo the slow process of fermentation in nature's laboratory, in immediate contact with the roots of the plants cultivated;—these gases are then converted to our own use. The consequence of this piece of saving economy may be seen by comparing Dr. Patterson's crop of corn with those of his neighbors, who follow the shortest way with their sedge.

We have shown that carbon forms more than one half of the vegetable substance; and, that oxygen and hydrogen form most of the remaining parts. We have likewise shown that charcoal, or in other words, carbon, when decomposed, with an elevated temperature in contact with oxygen gas, enters into union with the oxygen forming carbonic acid gas. We have also shown that oxygen and hydrogen by entering into union—two parts oxygen and one part hydrogen, form water.

We will now repeat in proper order, the operation which is going on under the sod when vegetable matter is turned under, and secured by the covering of the sod. The carbon is let loose from its concrete state in the sedge by fermentation—a part of the oxygen unites with the carbon, forming carbonic acid gas—the remainder of the oxygen unites with the hydrogen, which formed the substance of the old sedge, and forms water. Water has an affinity for carbonic acid gas, and will absorb its own bulk of that gas—these gases all being present, and confined by the incumbent earth, they enter into this union, in immediate contact with the roots of the plants of corn, are absorbed by the roots, and by the proper sap vessels are carried to the leaves, as we have formerly shown, the sap is there exposed on an enlarged surface to the action of light, heat, and electricity, and so modified by the peculiar organization of the plant as to render it the proper sap of *that plant*. It is owing to the peculiar organization of each plant that these gases elect that peculiar form which constitutes their species; but here our investigation ends, science cannot penetrate this secret farther. The sap is carried, as we have heretofore shown, from the leaf in its appropriate vessels, to increase and perfect the plant.—This unceasing round of matter constitutes vegetation.

In Dr. Patterson's practice there are two points worthy of particular notice—1st. After turning the old sedge carefully under, he does not disturb it in tilling the corn. By this means there is a bed formed for the roots of the plants to expand —The earth is rendered permeable, that these roots may easily extend in the direction in which they are invited by the presence of food; and likewise, that the oxygen and hydrogen being confined from escape, are compelled to enter into union and form water. In a dry season, when moisture cannot be obtained from the atmosphere, the supply thus formed will be of the greatest benefit to the plant, and prevent the effect of drought.

By ploughing the ground so deep in tilling the corn as to have turned up the half decomposed old sedge, these gases would have escaped in the atmosphere, and been lost to the cultivator.

In thus commenting upon the very judicious practice of Dr. Patterson, we are not vain enough to think we are advancing any thing *new*, but we treat the subject thus for the purpose of making old truths familiar, and to induce in the *young* farmer a scientific view of common operations.

Agricultural Chemistry—No. 6.

To the Editor of the Farmer & Gardener:—

Sir—I have before given a short sketch of the offices which the three principal gases perform in vegetation, and have shown that these gases enter into the composition of all vegetable substances, and constitute their essence, however they are varied in tissue, color or qualities.—We have seen in this review of the works of God, an instructive lesson on the wonderful power, wisdom and economy of the Divine Architect; who has combined these three primitive substances, Oxygen, Hydrogen and Carbon, into all the myriads of form, tint, tissue and quality, which are beheld in the vegetable kingdom; and has endowed them with the wonderful power, from age to age, without the least variation, each one to "Yield fruit, whose seed was in itself, after his kind."

We will now turn our attention to the matrix in which all these wonders are performed; and if we can there discover a corresponding simplicity of means, and display of power, it will be presumptive evidence of the truth of our theory; for wherever *infinite wisdom and power* operate, economy of means will always prevail.

In your last number, a correspondent, 'Agricola,' has shown, that in the rocks and stones which form a great part of the globe we inhabit, the same economy of materials prevails in their composition as we have noticed in the vegetable kingdom. In prosecuting the interesting study of Geology, we find that Quartz, Feldspar, and Mica, compose the greater part of all the rocks and mountains in the world; and if to them we add hornblend and lime,we have the elements of most of the component parts of our globe. These rocks are composed of mixed substances, formed of a few primitive materials, an understanding of which ought to enter into the course of study of every well educated gentleman, and more especially into the education of every one who is intended for the occupation of a cultivator of the earth.

Soils are formed by the disintegration of the rocks that have been mentioned. Pulverized quartz forms the sand of soils—clay is derived from the decomposition of feldspar; and lime from the disintegration of calcareous rock; these, in the course of time, have been washed down from mountain heights, and have formed the alluvial strata in our soil. These three earths form the principal mass of our soils, and are the

objects which demand the farmers' attention; for on the proper understanding and management of these depend all his future interest and living.

I now propose to take up these several earths, to analyse them, and to endeavor to arrive at an understanding of the offices they perform in vegetation.

Quartz.—This interesting species embraces numerous varieties differing much in their forms, texture, and external characters. It is sufficiently hard to scratch glass, and it always gives sparks with steel, more or less plentifully, unless the mass be too brittle to sustain the blow; and in this latter case its powder will be found rough to the touch, and sufficiently hard to scratch glass or steel. Cleaveland divides it into two *divisions;* the first of which embraces those varities which are susceptible of chrystallization and have a fracture more or less vitreous. The second division contains those minerals which appear to be composed essentially of silex only; often equally as pure as those of the first division, but which have never been chrystalized, nor perfectly transparent. Most of the varieties of this division have been classed with the species of silex.—Quartz is sometimes stalactical or uniform, and sometimes cavernous, corroded or in plates. It is often in pebbles or rolled fragments, and sometimes composed of distinct concretions, which may be granular, prismatic or lamallar.—Its specific gravity is from 2.58 to 2.68. It is often perfectly limpid, and forms many of the sparkling gems of great value to the jeweller.

Second Division.—The minerals under this division have never been chrystalized, nor are they perfectly transparent. When mixed with a small portion of alumine, lime, and iron, they form the most costly and brilliant gems of lapidaries. They appear to be essentially formed of silex. The great value of this species of mineral in agriculture, consists in obviating the too great tendency to adhesion in the other earths composing the soil. A sandy soil attracts caloric or heat, rapidly, and parts with it freely. It does not retain moisture, and renders the earth porous. By a due proportion of this mineral in the soil, it is rendered permeable to light, heat and moisture, and fitted for the extension of the roots of plants. By its great attraction of heat, it maintains a sufficient degree of temperature in the cold clay, to promote fermentation in the manure deposited in the earth; and for converting it into gas, to be imbibed by the roots of the plant. The proper study of the farmer is to have his soil supplied with this mineral, in such a quantity that a sufficient degree of heat and moisture may be present to promote fermentation. The farmer should always know the capacity of his land, to maintain that degree of heat which suits the plants he cultivates. Silex was considered as a simple, uncompounded body, until Sir H. Davy ascertained that it, like clay, lime, and other earth, was compounded of a metalic base united to oxygen, to which the name of silica was given by the discoverer, in the proportion of 60 of oxygen and 40 silicum out of 100 parts.

It is probable that silex is in a very slight degree soluble in water.

[From the Maine Farmer.]

A Popular Opinion Examined.

Mr. Holmes:—It was formerly my opinion, and I find it is still the opinion of many, perhaps a majority of farmers, that the wheat plant has a more tender constitution than other kinds of grain—that wheat is more liable to disease, generally speaking, I admit—but why is this a decisive proof of its having a more tender constitution than it is that an ox or a cow has a more tender constitution than a Turkey Buzzard, because if offered no other food than carrion they would languish and die? Wheat is a more rich or nutritive grain than others, of course its food must correspond in quality. Hence if we cultivate in a hap hazzard manner, and either from ignorance, laziness or carelessness adopt a mode of management not in accordance with the habits of plants, we ought not to ascribe its failure to the weakness of its constitution.

I first began to think seriously upon this subject some six or seven years ago. I was conversing with one of the best farmers in town on the subject of raising wheat and rye, and he observed that he did not often sow rye, for said he I am confident I can raise as many bushels of wheat with the same labor and on the same land as I can of rye. I have since paid considerable attention to the subject, and the result is satisfactory to my mind and proves to me that the failures in wheat are not owing to any inherent weakness in the constitution of the plant. In point of fact, I think I may safely say that I have generally lost in point of quantity, saying nothing of the superior value of wheat, by sowing rye instead of it. Rye in some soils will undoubtedly do well where wheat would not—this is not generally the case in this section of the country.

I have frequently, when enquiring of my neighbors in the spring what they intended to sow in some certain piece of land, received this answer, (if it happens to be somewhat late in the season), "It is of no use to sow rye now, I am going to sow wheat or oats, for rye does not do any thing sowed late." This in plain English is as much as to say that they consider even wheat in certain circumstances hardier than rye.

It is my firm conviction that the wheat plant has as hardy a constitution as the rye plant, or Indian corn, or even potatoes, and I don't care if you add *Canada Thistles* to the catalogue.—I have mentioned potatoes, and I will relate a fact upon this subject. I once had a field of potatoes, when I lived in Massachusetts, struck with a withering blast or rust when the potatoes were about as large as bullets, and in a few days the vines were all "*as dead as a hammer.*" I have said Canada thistles too—now we know that thistles have apparently as many lives as a cat, but still by mowing them frequently, at proper times, they are easily killed—but let any farmer closely examine the wheat and rye plants, especially if they have had such difficulties to encounter as mine has had this season, I think that instead of saying any thing about weak constitution he would say that they were tougher than thistles. In the field of rye, the examination of which I have partly published in the Farmer, I have lately pulled up some of the plants, the first roots of which I am confident from close observation from time to time are entirely rotten and gone, and with them the mould, occasioned by the fermentation of the manure also, and they are now "going ahead" on juices supplied by a second or third stock of roots, the bottom leaves indicating the ripening of the stalk at the lower joint and the ear blossoming and filling above. Some of the wheat plants that labored under the same or similar difficulties, now bid fair to achieve a most splendid victory, not only over natural obstacles, but also putting to flight a host of theories and idle speculations on the diseases and habits of this plant. I ask, will not these prove themselves to be hardy plants?

I think, Mr. Editor, it is high time for farmers to look into these things themselves. Our farmers generally, however industriously they may labor with their hands, don't like intellectual labor. No, sir, they had rather take Dr. Dwight's theory, or some other Doctor's, and patch it up a little, and then make a paraphrase about it to suit their ideas, and let it go. The more I look into these things the more I realize the necessity of long continued and close attention to this, as well as almost every thing else relating to the pursuits of agriculture. I should as soon expect to hatch hen's eggs in a furnace glowing with the intense heat of Nebuchadnezzer's, as to think of reaching the lofty summit of perfection in agricultural science by any other means. J. H. J.

Peru, July 18, 1834.

Covering for Houses.—First give the rafters a close sheathing of one inch thick seasoned boards and then make a cement of boiled plaster of Paris and tar, rub in a quantity of sharp sand, (or what is better still, the borings of cannon,) and let it be trowelled smooth; when perfectly dry give a coat of paint. My opinion is, this mode of covering houses is preferable to all others, for cheapness, durability, and perfectly secure from fire. Try the experiment.—Q IN THE CORNER.

Molasses from Potatoes.—The Cleveland (Ohio) Advertiser of Aug. 22d, says that a small quantity of molasses was brought to that village last week, from Medina county, manufactured from potatoes. Eleven quarts of thick molasses was procured from a bushel and three pecks of potatoes. The flavor is pleasant, and the article equal in every respect to West India Molasses. The process of manufacturing is said to be simple, and not expensive.

[From the New Orleans Bulletin.]

Louisina Sugar Crop.—The following calculation of the amount of the last crop made by one of our most intelligent merchants, will be found accurate.

Export to this day : :	27,000	
From Attapakas : :	4,500	31500
Now in town : : : :		1500
Do. on plantation, about : : :		6000
Consumption of Louisiana : : :		5000
Export via the Lakes for Alabama, Florida and Georgia, :		1000
Sugar shipped up the River : :		22000
		76,000

THE BREEDER & MANAGER.

[From the Library of Useful Knowledge.]

THE SHORT-HORNS.

Yorkshire—North Riding.—There are few parts of the kingdom in which so perfect a change has taken place in the breed of cattle as in this extensive division of Yorkshire. Mr. Marshall, who is undoubted authority here, says, in his 'Rural Economy of Yorkshire,' that, at the commencement of the eighteenth century, the ancient black cattle were the only breed in this district.—They resembled the present breed of the lowlands of Scotland, mostly horned, but some of them *humbled.* To these succeeded the long-horned, or Craven breed, and which, by degrees, spread over the whole of the northern and midland counties. At that time the chief work of the farm was done by cattle; the horse had not yet quite superseded the slower, but perhaps more profitable, ox; and many of the long-horns, until they began to be improved by the breeders in the midland counties, were deficient in several valuable points, while the use of them was exceedingly inconvenient, and sometimes dangerous, in the yoke.

On these accounts, the long-horns in their turn gave way to the Holderness, or short-horn breed, and that, for a century past, has maintained its ground, and will continue to do so.

Mr. Marshall gives a singular account of these cattle, when first introduced. He says, that 'the Holderness breed were thin quartered, too light behind, and too coarse before; large shoulders, coarse necks, and deep dewlaps. This form being found disadvantageous to the butcher, increasing the quantity of the coarser parts, and reducing the weight of the prime pieces, the breeder endeavored to enlarge the hind-quarters; and had he stopped when he had got to the happy medium, he would have wrought a good work; but the fashion was set—cloddy bullocks were in estimation. The first variety of this species of cattle, which I can recollect, was a thick, large-boned, coarse, clumsy animal; remarkably large behind, with thick gummy thighs; always fleshy, but never fat, and the flesh being of a bad quality. This, however, was not the worst: the monstrous size of the buttocks of the calf was frequently fatal to the cow, and numbers of cows were annually lost in calving. These monsters were stigmatized by the epithet "Dutch-buttocked," and they were probably the worst breed the Vale ever knew.'

This evil, however, soon cured itself; and, by judicious crossings from their own stock, and, soon afterwards, from the stock of the enterprising and skilful breeders on the banks of the Tees, the Yorkshire cow was brought to her present state of perfection, retaining, with little diminution, the milking properties of the Holderness, and the grazing ones of the improved short-horn, and being, in point of fact, what we have described her to be in p. 156. The old and comparatively unimproved breed is still indeed found in the possession of most of the dairy farmers of this part of the country, for the prejudice—and, as we have confessed, not an unfounded one—against the improved short-horns, that their milking properties have been sacrificed to the accumulation of fat, still widely prevails. Experience, however, gradually established the fact, that it is prudent to sacrifice a *small* portion of the milk to assist in feeding, when too old to continue in the dairy; or when, as in the neighborhood of large towns, her services as a dairy-cow are dispensed with at an early age. This cross being judiciously managed, the diminution of milk is so small, and the tendency to fatten so great, that the opinion of Mr. Sale (as quoted by Mr. Sheldon Cradock, of Hartforth, and to whom we return our thanks for some valuable information) is perfectly correct—'I have always found, in my stock, that the best milkers, when dried for feeding, make the most fat in the least time.' This is a doctrine which will be better understood and universally acknowledged by and by. Too many of the improvers of the short-horns have done but half justice to their excellent stock. He would deserve well of his country who, with skill and means sufficient, would devote himself to the illustration of this point.

It has been observed, that the cattle of this district have not improved of late so rapidly as in former times. There may be two reasons for this, viz., that the system of breeding *in and in* has been pursued somewhat too far, and that the depreciation of the times has withdrawn many landed proprietors from agricultural pursuits, and thus lessened that competition which was the most powerful stimulus to exertion.

The average weight of cattle in this riding of Yorkshire varies with the food and age of the animal. A steer, from 2½ to 3 years old, when fit for the market, will usually weigh from 65 to 75 stones, imperial weight, and a heifer from 55 to 65 stones. The usual method of preparing them for the market is simple enough. The calf gets milk for the first two or three weeks, and after that, scalded skimmed milk, mixed with oil-cake boiled in water, with hay and turnips, until the spring pastures have sufficient produce to support him; he remains in them until the following winter, when he is either tied up or turned loose into folds, and fed with straw and turnips until the ensuing May: he is then turned once more into the pasture until winter, when he is brought into the fold-yard as before, until nearly May-day, and now, approaching to a state nearly fat enough for the butcher, three or four months' grass feeding generally completes him. Both the improved and the unimproved cattle are treated in the same way. Now, however, appears the essential difference between the breeds—the most forward of the unimproved are scarcely ready when the improved cattle are gone, and they are never so fat and pointy as the others.

Upon the clay-soil of Cleveland, and other parts of this district, the grass-land is principally appropriated to the purposes of the dairy. There the unimproved breed mostly prevails; but even there, the most intelligent of the farmers begin to see the propriety of a cross or two from the Tees-water blood. The young cattle are principally sold in the neighboring markets, and are forwarded to the possessors of extensive turnip-farms in Leicestershire and Northamptonshire.

A great proportion of the cows for the supply of the metropolitan dairies come from the North Riding of Yorkshire. They are sent away within a month or six weeks after calving, and either journey directly to London, or halt for a year or two in Bedfordshire, or some of the midland counties, in order that they may not reach their ultimate destination until they are five or six years old.

Among the breeders of the pure short-horns in this Riding, Major Bower, of Welham, deserves honorable mention. His name appears among the purchasers at Mr. Charles Colling's sale. His cow Daisy, bought there, produced some excellent stock. A heifer of his breed, slaughtered at the age of 18 months, weighed 64 stones, imperial weight, and 10 stones of tallow.

The Earl of Carlisle formerly endeavored to improve the breed of this district by crossing with the Devonshire, and Mr. Cleaver with the Sussex cattle, and it was said that more kindly feeders were obtained, the size was reduced a little, the leg shortened, the bone rendered finer, the form improved, and the strength of the short-horn remained for draught with the activity of the Devon. Whatever might have been the case with the first cross, this supposed improved race has passed quite away.

A cross between the short-horn bull and the Argyleshire heifer was attempted, with greater prospect of success. Mr. Bates had obtained some excellent cattle from a similar attempt, but they could not be fed to an equal weight in the same time, and they were deficient in early maturity.

West Riding.—This is principally a manufacturing district, and there are comparatively few agriculturists who pay much attention to the improvement of the breed of cattle. The short-horns, either the Holderness or with some crosses of the Durham, are chiefly found in the neighborhood of the large towns. More in the country, and where the farms are small, (as they are through a great part of this riding,) there are a variety of crosses with the long horns, and with nondescripts of former days. They go under the characteristic name of *half-horns;* the country people are fond of them, they are hardy, yield plenty of milk, and fatten with tolerable quickness. One would wonder how they retain one good quality, for Mr. Sorby, of Holyland-hall, very characteristically describes them, and the little farmers of almost every district—'Those who have a cow or two, of some favorite kind, send them to the nearest bull, which does well enough, provided he gets them a calf.' We must confess, that we nowhere saw so great a collection of mongrels as in the manufacturing portion of the West Riding.

Mr. Newman, the agent of lord Fitzwilliam, satisfactorily accounts for this. He thus writes to us—'The breed of cattle in the greatest esteem in the vicinity of Wentworth, and in fact throughout all the southern part of the West Riding of Yorkshire, is the pure short-horn. A traveller, however, passing through this district, will observe many deviations from that breed, and will meet with crosses that he will have much difficulty to identify. The farms are small, and the farmer has a kind of mixed employment, partly agricultural and partly mercantile: hence his attention is not so much directed to his farm as it should be, and hence arises a certain degree of

carelessness to the selection of his cattle; added to this, there is an idea, although an erroneous one, that the pure short-horns are not good milkers, and which tends materially to check the breed.'

In the districts near Doncaster, where the population is more strictly agricultural, the short-horns prevail, and those of a breed and quality highly creditable both to the mere tenant-farmer and to the gentleman who farms his own estate.

It is due to the memory of the late Mr. Mitton, of Badsworth, to place him at the very head of the improvers of short-horn cattle in this district. His 'Old Bull,' known in the Herd Book by the name of 'Badsworth,' is still in the recollection of the farmers of that neighborhood, and no animal contributed more to the improvement of the cattle for many miles round.

About the year 1805, the Wortley Farmers' Club was established, chiefly by lord Wharncliffe (then Mr. Stuart Wortley); and by the operations of that society very considerable improvement was effected in the breed of cattle, sheep and pigs, round Wortley. In 1818 this society ceased to exist, for one more effective had been formed at Doncaster, under the patronage of Earl Fitzwilliam, lord Althorp, Sir A. Cooke, and Mr. Fullerton of Thrybergh Park, and other neighboring gentlemen. This society still flourishes, and a very fair number of excellent cattle are annually exhibited, the males of which become dispersed through a wide district of country. The short-horn cattle have borne away all the prizes.

In almost every part of the West Riding, many Scotch are fed for one year or two, and then sold to the butcher to be slaughtered for home consumption.

As we advance towards the moorlands of the west and north-west of the district, the half-horns prevail more; and in Craven, the native county of the long-horns, we find both the large and the small variety of this breed in tolerable perfection, but perhaps not so much so as in the north of Lancashire. Even here, the short-horns have penetrated and are increasing.

East Riding.—The short-horns prevail universally through this riding, except among the cottagers and little farmers, who still obstinately cling to some of the different varieties of half-horns. It is decidedly a breeding country, and a great number of cows are yearly sent from it to Lincolnshire, to be prepared for the London dairies; yet many oxen and cows are brought from the Wolds to the fortnightly and weekly markets so frequent in Yorkshire, and pastured on the rich ground with which the riding abounds.*

* In some part of this riding, as well as in the north of Lincolnshire, a very useful society or club used to exist, and is still to be occasionally met with, called 'The Cow Club,' the principal rules of which we abridge from 'Strickland's Survey.'

'Each member shall, on the 12th of May and the 12th of November, pay three-pence in the pound, on her value, for every cow that he insures, which sum, when it amounts to £20, shall be placed at interest, in order to accumulate for the benefit of the club. No cow shall be admitted without the approbation and valuation of one of the proper officers of the district, to whom, if required, she shall be sent for inspection.

'Upon the death of any cow, the officer shall inquire into the manner of it; and if it appears to have been caused by wilful neglect, or by his refusing to employ some farrier or veterinary surgeon, he shall receive no benefit; but for every cow dying of disease, and without the neglect of the owner, there shall be paid five-sixths of her estimated value; but no member shall receive any benefit from the institution upon the death of a cow more than fourteen years old.

'If, upon any accident, the officer of the district shall deem it necessary to have a cow slaughtered, the owner shall have the option of receiving the net value of her carcass, the expense of slaughtering being deducted, or five-sixths of her estimated value in the books. Every member not making payment on the day appointed, or within fourteen days afterwards, shall be excluded.'

The five-sixths of the value will give the cottager an interest in her recovery or preservation, whereas if he was paid the whole value he might be careless.

[From the London Lancet.]

LECTURES ON VETERINARY MEDICINE, *Delivered in the University of London, by Mr. Youatt.*—LECTURE V.

The veins of the Nasal Cavity—Hæmorrhage from the Nose—The nerves of the Nose—The sense of smelling.

The Veins of the Nose—The Schneiderian membrane being so plentifully supplied with arterial vessels, the veins are proportionally numerous and large. They do not, however, pursue their course in the usual manner, but are continually running into sinuses, and particularly on the lower part of the nasal cavity, and on the inferior turbinated bone. This accounts for occasional hæmorrhage from the nostril of the horse from very slight causes, and for the difficulty of arresting it. A sinus, or reservoir of blood, so superficial and ill defended, is easily ruptured, and, there being little contractile power in such a vessel, the orifice is with difficulty closed.

Spontaneous Hæmorrhage from the Nose in the Horse—The horse is more subject than any other domesticated animal to *epistaxis*, or spontaneous hæmorrhage from the nostril, and the discharge of blood is sometimes very great. The bleeding is with great difficulty arrested, and the habit of recurrence is too easily formed. The application of cold is usually employed to stay the bleeding, but generally without success. The nasal cavity is large, and it is difficult or impossible to discover the precise spot from which the hæmorrhage proceeds. I have employed water artificially cooled to some degrees below the freezing point, over the whole surface of the nasal and superior maxillary bones, and that until I was heartily tired of it, and my hands were almost frozen, without the slightest avail. I have injected solutions of alum and sulphate of zinc and catechu with no better result. The structure of the velum palati renders it impossible to fix a compress in the upper part of the nostril by means of any string passed into the back part of the mouth; and the impossibility of preventing a horse from sneezing when he feels the inconvenience of a tent lower down, cuts us off from these mechanical means of plugging up the passage, and forming a coagulum on the orifice of the ruptured vessel. Generally speaking, therefore, we are passive spectators; and, if the horse is in good condition, we entertain no immediate fear, for the discharge may be beneficial rather than otherwise. The principal apprehension is with regard to the formation of the habit. A horse that was subject to these periodical discharges, and which neither bleeding from the jugular nor physic could prevent, was, one morning, found dead in his stall, and his blood covered the floor of the stable.

Repeated hæmorrhage from the nose has preceded glanders; the chronic or half-healed ulcer has taken on a chancrous character. Somewhat low diet, mashes, diuretic or slightly aperient medicine, so as not to interfere with the work of the animal, are indicated when there is this tendency to spontaneous hæmorrhage; and, more particularly, it is necessary that the horse shall not be too tightly reined, and that the collar shall not press upon the jugular at the lower part of the neck.

Spontaneous Hæmorrhage in the Ox.—Oxen, and especially those that are worked, and that are in tolerably high condition, are also subject to epistaxis. An ox too long and too hardly worked during the heat of a summer's day, will frequently bleed from the nose; but I fear that the hæmorrhage is too often occasioned by blows on the nasals or on the muzzle, inflicted by a brutal drover or ploughman. The bleeding has gradually stopped, and I am not aware of any case in which unpleasant consequences have ensued.

Leeches producing Hæmorrhage from the Nose.—I have heard of leeches having fastened on the muzzle, and thence crept into the nostril of the ox and the horse, and particularly of the latter, when drinking from a stagnant pond. These blood-suckers shifting from place to place in the nostril, and biting here and there a considerable hæmorrhage has been produced. If the leech can be seen when the nostril is examined in a good light, or if its presence is strongly suspected, some salt and water should be injected into the nose, for by this the intruder will be speedily detached. The bleeding from the slight wounds of a leech-bite will soon be stayed.

The Nerves of the Nose.—This cavity is as plentifully supplied with nervous ramifications as with blood-vessels. First, there is the nerve of peculiar sensation—*the olfactory nerve*, of which I shall have presently more fully to speak; passing through the numerous apertures of the cribriform plate, and spreading its pulpy matter over the whole of the nasal cavity, and probably over the membrane of the sinuses connected with this cavity; but most evidently to be traced on the upper part of the septum, and on the æthmoid and superior turbinated bones. On this nerve depends the *sense of smell.*

Of nerves of *common sensation* we have, first, the *palpebro-nasal* (the *lateral uasal* of Mr. Percival) a branch of the ophthalmic, parting from it at the base of the orbit, between the levator and the retractor muscles, and entering again the cranium; pressing through the cribriform plate, and ramifying minutely, and with many beautiful anastomo-

ses on the æthmoidal cells, the frontal sinuses, the turbinated bones, and the septum; a branch of it creeping along the top of the inferior turbinated bone, and sending its ultimate branches to the false nostrils, but other branches from other portions of it ramifying also on the false nostrils and the alæ of the nose.

There is also the true *lateral naval*, a branch, of the anterior maxillary passing through the spheno-palatine foramen, and dividing; giving one branch for the external wall of the cavity, and another for the septum and the posterior part of the cavity generally.

One branch runs along the bottom of the septum to its anterior extremity, and through the foramen incisivam to the roof of the mouth. It sends a twig to the naso-palatine ganglion, and anastomoses with the palatine, and so completes the circle of nervous influence between the palate and the nose,—that connexion between the senses of taste and of smell, of which we have a thousand proofs.

The *anterior maxillary* nerves give many filaments to the alæ of the nose.

THE GARDENER.

[From Nuttall's Introduction to Botany.]

The *Vascular texture* is the next of the solids enumerated. It consists of hollow tubes of different forms and structure, which are capable, like the vessels of the animal frame, of conveying fluids. When a succulent stem is cut transversely fluids are seen issuing from different points; and, if the peculiar juices of the plant be of a milky or colored nature, as in the fig tree, or in any of the species of the genus Euphorbia, they are still more clearly perceived to issue from different points; for instance, the watery or colorless from one set, and the milky or the colored from another. This circumstance leads us to conclude that the sap, or watery fluid imbibed from the soil, is carried in one set of vessels, and that the proper juices formed from the sap by the vital powers of the plant, are conveyed in another; or, that there are *conducting* and *receiving* vessels.

The minuteness of these vessels requires the aid of the microscope for their examination; and even by its assistance as they are not easily seen, owing to their coats being in many cases transparent, and the fluids contained in them colorless, we are obliged, in order to render them more evident, to have recourse to colored fluids, which are readily observed when the cut ends of twigs or branches are immersed in them; and the course of the vessels through the branch is thus marked by the color. The most eligible fluids for this purpose are decoctions of Brazil wood, and infusions of the skins of black grapes; the plants likely to yield the most satisfactory results, are the *Periploca græca*, the *Aristolochia Sipho*, or Dutchman's Pipe, and the young shoots of the Poke (*Phytolacca decandra.*) The plant or twig to be thus injected should be cut with a very sharp knife, and its divided end immediately placed in the colored infusion in a warm temperature: after a few hours the color, in plants favorable for the experiment, may be traced into the leaves, the flowers, and even the fruit. This discovers the course of the conducting or adducent vessels; and when the operation is reversed, the twig being cut at its top, and inverted in the colored fluid, we can trace that of the returning or receiving vessels. By placing transverse and longitudinal sections of twigs and parts of herbaceous plants thus treated under the microscope, we are able to ascertain the organization of the coats of the vegetable vessels. Some of the vessels, however, cannot be rendered more visible by this means, as they refuse to admit colored fluids, and therefore a knowledge of their structure can be obtained only by means of powerful microscopes.

The *Vascular* or tubular portion of the vegetable structure composes a kind of net-work, owing to the frequent apparent communication or anastomosis of the vessels with one another. They are, however, no where *wholly continuous*, but separated at variable lengths by diaphragms or by *respective partitions*, so as, in fact, to be only arranged in bundles. The particular vessels vary both in form and in the diameter of their calibres. They are composed of the membraneous texture, are firm, comparatively thick, and somewhat pellucid. Mirbel describes 6 different kinds of vessels; but the whole may be arranged under the three following genera: viz. 1st. Entire vessels, or Vasculoid cavities; 2d. Perforated vessels; 3d. Spiral vessels.

1st. The *entire or proper Vessels*, as their names import, have been considered as simple tubes formed of imperforated membrane. They are generally in bundles, disposed in the cellular part of the bark. They are found in the young shoots of almost every kind of plant; and in the fasciculated state may be detected, and examined by the aid of magnifying glasses, in the leaf-stalk of the common Fern, in the Arrow-head (*Sagittaria sagittifolia,*) and in the Hemp plant. In order to examine them individually, the bundles should be steeped in spirits of turpentine for a few days, by which means the vessels can be apparently detached from one another.

These vessels are intended to contain the proper juices of the plant, and are generally found filled with oils and resinous juices; consequently they are more obvious in plants, of which the juices are of a thick, resinous nature; and these, drying in the bark, are the matters on which the medicinal virtues of this part of the plant in general depend.

According to Grew, seconded by the observations of Decandolle, Link, and others, the *Proper Vessels* are mere *intercellular* spaces filled with extravasated, deposited juices, which put on the vascular appearance only by the pressure of surrounding cellular tissue. Grew termed them *Tabular Hollows* and *Air-vessels;* Decandolle calls them *Aerial Cavities;* and Link, *Accidental Reservoirs of Air.*

2d. The *Perforated Vessels* are cylindrical tubes, the sides of which are said to be pierced with minute perforations variously distributed. They may be divided, according to the character of the perforations, into two species, viz. *cribriform vessels*, the perforations of which are simple pores, arranged in parallel series, transversely and equidistant over the whole surface of the tubes. Mirbel denominates them porous vessels; asserts, that each perforation is surrounded with an elevated border; and observes, that they must *not* be regarded as continuous tubes, as they often separate, join again, sometimes disappear altogether, and always terminate in cellular tissue. They are found in the substance of roots, in the formed wood of stems, branches, leaf-stalks, and the central ribs of leaves; and are most numerous in hard woods, as those of the Oak and the Chesnut. Their pores are so extremely small, that, in order to perceive them, a thin longitudinal slice of the wood to be examined must be cut, and placed in a drop of pure water under a powerful microscope. It has not been ascertained what kind of fluid is contained in these vessels. They have apparently no visible office but that of air-vessels; even their pores are formed similar with the cortical or external ones.

A modification of the perforated vessels has the appearance of a string of beads, consisting of united portions of a porous tube, narrowed at the extremities, and divided from each other by diaphragms. This variety of vessels is found frequently in roots, and at the going off of branches, and the attachments of leaves, being intermediate between the large vessels of the stem and those of the branches; and forming, as it were, a link with the character of the cellules.

Another variety of the perforated vessels, called *annular*, are so named from the perforations being transverse and oblong, as if the tube were formed of rings of the same diameter, placed one above another, and attached at some part of their edges, but not touching throughout the whole circumference. These are, in fact, porous vessels, with oblong transverse perforations, resembling in every respect, except shape, the round pores of the last described vessels. They are found in greatest numbers in the less compact, woody parts of the plant. The centre of the majority of the species of *Lycopodium*, or Club-moss, contains a thick cylinder, which is chiefly composed of vessels of this kind. Ferns also inclose many of them, in their woody threads; and several other plants, particularly the Vine, the wood of which is soft and porous, contains them in great numbers.

Each of these kinds of perforated vessels is occasionally seen forming different parts of the same tube; or one portion of it may present the cribriform character, and another the annular.*

* Decandolle, doubting the existence of truly perforated vessels, termed them *pointed* and *rayed* vessels. Dutrochet considers the apparent points as globules filled with a greenish, transparent matter. These bodies become opaque by nitric acid, but acquire their transparency again on the addition of caustic potash. The opinion of Mirbel, that these points are perforations, must appear doubtful, from the great minuteness which he attributes to them. Rudolph and Link consider these grains as amylaceous or mucilaginous; while Treviranus imagines them to be young cellules destined to acquire growth, and become cells. Amidst this diversity of opinion, to be decided only by observation, we must for the present remain in doubt of the real structure of this class of vessels; but by analogy we are led to believe that they will eventually be found very similar to *tubular* cells, and that the green particles

[From the Southern Agriculturist.]

ON THE SELECTION OF SOILS FOR A VINEYARD.

HANCOCK CO. (GEO.) July, 1834.

Mr. Editor—Six or eight years ago, a desire to cultivate the vine, seemed to be spreading so extensively through South Carolina and Georgia, that by this time it was expected we should have, if not abundant supplies of good domestic wine, at least such reports of progress as would furnish valuable directions to adventurers of the present day. For such reports I have looked in vain to the pages of your useful repository, and other accessible sources of information. It was never probable, that every vine planted would succeed well, because too little was known in this country of the culture, eligibility of soils, or variety of the vine to be planted. Except Mr. Geiger, Mr. Herbemont, and a few others in Carolina; and, perhaps, about the same number in Georgia, I have heard of no experimenter, whose achievements in wine-making, can be regarded as at all encouraging. Every one has raised vines,which in the spring season, give fair promise of fruit; but unluckily before vintage, mildew, rot, or some other form of malady, seems, in most instances, to have destroyed most or all of the crop. Such, at least, has been the fate of mine, and several other small vineyards within the range of my observation, though I have remarked a few notable exceptions.

A knowledge of the causes of failure and of success is in great demand by all who think of prosecuting this interesting branch of cultivation; and this cannot, so certainly and conveniently be had, in any other way as by detailed accounts of experiments, setting forth the mode of planting the vines, the kind of earth in which they may have grown—whether clay, sand or loam predominates—the name of the vines, methods of tillage and training, together with the experimenter's own remarks on the subject. It is in the hope of drawing from some of the readers and patrons of the *Agriculturist*, that I ask the publication of this article.

It has been said, I know, that an annual excision of the superficial roots of the vine, so as to force the plant to subsist and propagate fruit, by the roots more deeply rooted beneath the surface, would be found a security from mildew and rot. This mode of treating vines is often practised in this country, and possibly with beneficial effects. Mine, however, which grow thriftily in a deep sand, have not matured one half the fruit.

It has also been said, that sandy and rather poor land produces more perfect and richer berries than soil of greater fertility, and more largely mixed with clay. This, too, is contradicted by my observation. By far the most thrifty and valuable vineyard, I ever saw, compring six or eight varieties of the grape, on about seven acres, is now cultivated in the county of Jasper, (Georgia) on a high hill of pretty rich red clay and very stony. I saw it last July in full bearing, the fruit just beginning to ripen, and not a berry diseased, except a few Isabellas, and, perhaps, one other variety, the name not now remembered. The excessive wet weather of last spring was fatal to grapes growing on sandy soils; yet the vineyard in the Jasper, on red clay, was never more prolific, yielding, as I understand, between one and two thousand gallons of wine, which the skilful and fortunate cultivator, Col. Alexander, sells readily at from one and a half to two and a half dollars a gallon, when above one year old. But this was not the only instance of pretty uniformly good crops being produced on rich red clay lands.

What time may do for vines which grow on poor and sandy land, our brief experience in the culture of the article has not yet shewn—such lands, I know, are recommended by most European writers; yet it is well known that in a state of nature, it is our rich woodlands only that produce our thriftiest vines and the richest fruit. The experience of Europe may be different, or as has been often stated, and yet no safe guide in this respect to the American adventurer.

The most productive vines I ever saw, is the mother of that family of excellent grapes, known as the "Devereux grape." It stands in my neighborhood, is now thirty years old or upwards, and has been trained on arbors to the length of one hundred feet or more—never much pruned—produces a good crop every year, and grows in soil almost as rich as manure can make it. I have a number of thrifty vines of the Devereux grape in a vineyard of rather poor sandy land, which have not perfected fruit oftener than one year in three since they began to bear—they may do better when older; but from the facts that have fallen under my notice, I would, for the location of a vineyard, select the richest red clay of suitable elevation that I could find. Long spells of rain, will, I fear, ruin the fruit of any vines in this country which grow on beds of deep sand—unless, indeed, such consequences may be averted by copious applications of manure.

HIGHLANDER.

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observed by Dutrochet, will turn out to be the *very similar* motory particles of the cellules; and as all this class of vessels are at one period, at least, empty, or only filled with gases or air (their parietes only containing the circulating fluid,) we can perceive no necessary economy answered by the additional contrivance of lateral perforations. At the same time, the affinity of structure between the vessels with annular openings, and the spiral ones, would tend to confirm the views of Mirbel, though the latter organs are by all phytologists considered as perfectly distinct in structure and function from every other kind of vessels.

MISCELLANEOUS.

How to have Green Corn in the Winter.—Of all the productions of summer, there is hardly one more nutricious and palatable than green Corn; and yet it is proscribed as contributing to some of the complaints of the season. It is, however, in this, as in many other cases, that the ingenuity of man has found means to turn this inconvenience into good account, by preparing and keeping this article for winter use. But the method of doing this, seems not to be universally known. It is common in many parts of New England, but the writer does not recollect to have seen the prepared article in our market. It may be so prepared as to be as good and as palatable in the winter as in the appropriate season, and may be eaten with perfect safety, if not as a promoter of health.

The simple process of preparing it is this:—The Corn must be taken from the stalk when it is full in the milk, or in that state in which we generally use it—the husks stripped off, and the ears thrown into a kettle of boiling water, when it may remain half as long as you would boil it for the present use. This will harden it so that it may be easily taken from the cob: It may then be spread in the sun till it is thoroughly dry; In preparing it for the table it may be soaked from twelve to fifteen hours, and boiled in the same water. But care must be taken not to boil it too much, as that will make it hard and diminish its sweetness.

N. B. To get the corn from the cob, every alternate row may be punched off with a sharp stick, and the remainder wrung off with the hands.

Corn thus prepared would command almost any price in the winter.—*N. Y. Com. Adv.*

Sponge.—Many of our young readers, we presume, are not aware that the sponge which they use in performing their morning ablutions, is but the skeleton of what was once a living animal. Young misses, in particular, would shudder at the idea of rubbing their fair foreheads and rosy cheeks with a skeleton. But it is even so. "The sponge belongs to the lowest order of beings in the animal kingdom. It consists of a fibrous mass,containing a jelly-like substance,which, when touched, discovers a slight sensation, the only sign of life manifested. When the sponge is living, the large apertures in it serve to carry out fluids from within; while the water by which the animal is nourished, is imbibed by minute pores. This continued circulation of water is one of the most important functions of the living sponge. If a part of one of these animals is separated from the rest, it will itself be as perfect a living animal as was the whole before. There are many species of sponge; the most valued in the arts are found in the Mediterranean sea and Indian Ocean. They grow upon rocks and upon the bottom of the sea.—*American.*

From the Lynchburg Virginian, Sept. 4.

High prices!—Three hhds. of Tobacco, made by Mr. Douglass B. Lane of Alleghany,—and the first we are informed that ever came to this market from that county,—were sold at Lynch's warehouse on Monday last at auction at the following prices:—No. 1, $10½, No. 2, $9½; No. 3, $8; average for the crop $933.—A crop of three hhds. made by Mr. John Bowyer of Rockbridge was sold the same day for $10, 8 and 7.

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Editorial paragraphs running at large—A. Spencer's opinion of Gama Grass—Knitting Machine; information wanted—Eagle Balance—Drought and Fresh in North Carolina—Maryland Horticultural Society's Report—Chemistry—Dr. Patterson's method of "using up" old Sedge—Agricultural Chemistry; Elements of Soils—A popular opinion respecting the Wheat Plant examined—Covering for Houses—Molasses from Potatoes—Louisiana Sugar Crop—Short-Horns, *continued*—Youatt's Lecture V.; the nose—Vascular texture of Plants—On the selection of Soils for a Vineyard—How to have Green Corn in the Winter—Sponge, an animal—High Prices—Advertisements.

BALTIMORE PRODUCE MARKET.

☞These Prices are carefully corrected every MONDAY.

	PER.	PROM	TO
BRANDY, Apple,	gallon.	$0 36	$—
Peach,	"	75	—
BEANS, white field,	bushel.	1 00	1 10
BEEF, on the hoof,	100lbs.	4 00	5 25
CORN, yellow,	bushel.	64	65
White,	"	64	65
COTTON, Virginia,	pound.	—	—
North Carolina,	"	11	13
Upland,	"	14	15½
FEATHERS,	pound.	36	38
FLAXSEED,	bushel.	1 37	1 50
FLOUR—Best white wheat family,	barrel.	6 50	7 00
Do. do. baker's	"	5 75	6 25
Do. do. Superfine,	"	5 00	5 25
Super Howard street,	"	5 12	5 25
" " wagon price,	"	5 00	5 18
City Mills, extra,	"	5 25	5 37
Do.	"	5 00	5 25
Susquehanna,	"	5 25	—
Rye,	"	3 37	—
GRASS SEEDS, red Clover,	bushel.	4 50	5 50
Timothy (herds of the north)	"	3 00	3 50
Orchard,	"	3 00	3 50
Tall meadow Oat,	"	2 50	2 50
Herds, or red top,	"	1 25	—
HAY, in bulk,	ton.	—	13 00
Pressed,	100 lbs	—	90
HEMP, country, dew rotted,	pound.	6	7
" water rotted,	"	7	8
LIME,	bushel.	—	35
MUSTARD SEED, Foreign,	"	4 50	5 00
Domestic,	"	5 00	—
OATS,	"	30	33
OIL, linseed,	gallon.	—	92
Castor	"	1 62	1 75
PEAS, red eye,	bushel.	75	—
Black eye,	"	— —	—
Lady,	"	—	—
PLASTER PARIS, in the stone,	ton.	2 75	—
Ground,	barrel.	1 37	—
PALMA CHRISTA BEAN,	bushel.	1 50	—
RAGS,	pound.	3	4
RYE,	bushel.	65	66
TOBACCO, crop, common,	100 lbs	3 75	5 00
" brown and red,	"	5 00	7 00
" fine red,	"	7 00	9 00
" wrappery, suitable for segars,	"	6 00	12 00
" yellow and red,	"	8 00	12 00
" yellow,	"	13 00	17 00
" fine yellow,	"	15 00	25 00
Seconds, as in quality,	"	3 50	5 00
" ground leaf,	"	5 00	9 00
Virginia,	"	4 00	—
Rappahannock,	"	—	— —
Kentucky,	"	4 00	10 00
WHEAT, white,	bushel.	1 05	1 13
Red,	"	95	1 05
WHISKEY, 1st pf. in bbls	gallon.	32	34
" in hhds	"	30	—
" wagon price,	"	28	29
WAGON FREIGHTS, to Pittsburgh,	100 lbs	1 50	—
To Wheeling,	"	1 75	—
		washed.	*unwash*
WOOL, Prime & Saxon Fleeces,	pound.	50 *to* 60	24 *to* 26
Full Merino,	"	40 50	22 24
Three fourths Merino,	"	35 42	22 24
One half do	"	30 35	21 22
Common & one fourth Meri.	"	28 30	18 20
Pulled,	"	28 31	18 20

SUBSCRIBERS can have their volumes of the AMERICAN FARMER neatly half bound and lettered at this establishment, at 75 cents a volume. Most of the Nos. can also be had at 10 cents each, to complete files.

NEWFOUNDLAND PUPPIES.

SEVERAL fine DOG PUPPIES of this variety, the produce of a very valuable pair, recently procured from Philadelphia—may be had at $10 each, on application to I. I. HITCHCOCK,
Sept. 16. American Farmer Establishment.

BALTIMORE PROVISION MARKET.

	PER.	FROM.	TO.
APPLES,	bushel.	$ 37	$0 40
BACON, hams,	pound.	11	—
Shoulders,	"	—	9
Middlings,	"	—	10
BUTTER, printed, in lbs. & half lbs.	"	31	—
Roll,	"	12	20
CIDER,	barrel.	—	—
CALVES, three to six weeks old	each.	4 00	7 00
COWS, new milch,	"	22 00	30 00
Dry,	"	9 00	12 00
CORN MEAL, for family use,	100lbs.	1 62	—
CHOP RYE,	"	1 62	—
EGGS,	dozen.	13	—
FISH, Shad, trimmed		—	—
" salted,	barrel.	6 37	—
Herrings, salted, No. 1 & 2,	"	4 00	4 50
Mackerel, No. 1, 2 & 3,	"	4 00	4 50
Cod, salted,	cwt.	2 25	2 50
LAMBS, alive,	each.	1 25	2 00
Slaughtered,	quart'r	31	50
LARD,	pound.	8	—
ONIONS,	bushel.	—	75
POULTRY, Fowls,	dozen.	1 75	2 00
Chickens,	"	1 75	2 00
Ducks,	"	2 00	2 25
POTATOES, Irish,	bushel.	—	62
Sweet,	peck.	19	25
VEAL, fore quarters,	pound.	7	—
Hind do.	"	8	—

ADVERTISEMENTS.

A RARE CHANCE.

THE subscriber has the selling of the following Stock, at prices lower than of any similar stock he has ever known offered in this country. These animals will be for private sale, at the annexed prices, until Saturday, the 25th day of October, (the day after the termination of the Baltimore races), when all that may remain unsold will be offered at public auction. It is probable that many other animals will be added to the sale, of which due notice will be given. The subscriber has recently inspected every individual comprised in the following list, and therefore pledges himself that they will be found to answer the description here given. They are numbered, for convenient reference. Gentlemen wishing to improve their stock are not likely to have frequently such opportunities for doing it as the one now offered them.

Thorough-bred Durham Short-Horns.

No. 1—A Bull, about 18 months old, dun and white, of good size, and very handsome. This is a valuable animal. Price $200.

No. 2—A Heifer, about 18 months old, red and white, of good size, and very handsome. She is in calf to a thorough-bred bull. Price $150.

No. 3—A Heifer, of same age and description in *all* respects as No. 2, and same price. She is a great beauty.

Calves.

No. 4—A white Bull.
5—A dun and white do.
6—A red and white do.
7—A red and white Heifer.
8—A white Heifer.

These are all calves of 1834, of the same stock as the above described, and equally promising. Prices from $80 to $120 each.—Each of the above animals will be sold with a well authenticated pedigree of pure blood.

No 9—A Heifer Calf, red and white.
10 do. do. do.

These two calves are of the same stock as those previously described, and equally handsome, but the pedigrees of their dams being lost, they will be sold without pedigrees, though they are *known* to be thorough-bred. Price $50 each.

No. 11—A thorough-bred bull, about 15 months old, red and white, of good size and form—a very valuable animal. He was bred by a gentleman of Philadelphia, who has imported a few thorough-bred cattle for his own use, but as he does not deal in them, he keeps no written pedigrees of his stock. His certificate, however, which will accompany the bull, is a sufficient guarantee of the purity of his blood. The brother of this bull, 3 years old, was sold this summer by John Barney, Esq. for $300. This will be sold for $200.

Alloyed Durham Short-Horns.

The following, though not thorough-bred, are (several of them) very fine animals.

No. 12—A three-fourths blood Bull, nearly white, two years old in May last—very large—was got by Hector, a thorough-bred bull, raised by Mr. Powell, out of a fine half-blood cow. Price $100.

No. 13—A seven-eighths blood Bull, red and white, two years old in July last, of middling size, and very handsome—got by the celebrated thorough-bred bull Bolivar, out of a three-fourths blood cow. Price $100.

No. 14—A three-fourths blood Bull, red and white, one year old—got by Bolivar, out of a half-blood cow. Price $75.

No. 15—A fifteen-sixteenths Bull Calf, five months old, white and red—got by Apollo, (thorough-bred) out of a seven-eighths blood cow. He is a calf of extraordinary beauty, and great promise. Price $75.

No. 16—A seven-eighths Cow, (the dam of No. 15), a fine breeder, for which alone she has been kept. She is 10 years old, in good health and condition, and is supposed to be in calf by No. 12 or 13. Price $50.

No. 17—A three-fourths blood Heifer, 3 years old, white—got by Bolivar, out of a half-blood cow. She is small, but very handsome. She has had one calf, and has proved herself a fair milker, and is in calf now to No. 12 or 13. Price $75.

Sheep.

No. 18—A Buck, of the New Leicester or Improved Bakewell breed, two years old—a good animal. Price $50.

No. 19—A Buck, of the Cotswold breed, two years old; a valuable breeder. Price $50.

No. 20—A Buck of last spring; pure Improved Bakewell breed—very large and likely. Price $50.

No. 21—Twenty Bakewell Ewes, of pure blood, but having been kept not quite in Barney's style, are not first rate, except in blood. They will be sold for $20 to $25 each.

Boar.

No. 22—A fine Boar, 7 months old, a cross between the two celebrated breeds known as the Mackay and the large spotted Woburn or Duke of Bedford breed. He is a remarkably fine hog, and will be sold for $20, not less.

Fillies.

No. 23—A pair of very beautiful sorrel Fillies, one year old, remarkably well matched, thorough bred—pedigrees and prices shall be furnished on request.

Address I. I. HITCHCOCK,
American Farmer Establishment,
Who has for sale Devon Cattle of pure blood, at very low prices. Sept. 16.

GAMA GRASS SEED

JUST received, and for sale at this Establishment—Price 50 cents per ounce.
Sep. 23.

SEED WHEAT, RYE, &c.

THE subscriber offers his services for the procurement of Seed Wheat, Rye, &c. for those who shall provide funds in Baltimore for that purpose. He does not keep those articles on hand, and therefore can send them to those only who furnish him with the *means in advance*. For all such, however, he will use his best judgment to procure such grain as shall be ordered, charging a small commission for his agency. I. I. HITCHCOCK,
Amer. Farm. Estab.

Note—I. I. H. has made arrangements for procuring for cash, Seed Grain of the very first quality, from some of the best farms in Maryland. aug. 12

100 Bushels of PEACH STONES WANTED, or any less quantity, for which a fair price will be paid at this Establishment. Sep 16.

PIGS OF THE BARNITZ BREED.

ABOUT the 25th inst. I shall be ready to deliver a few of these celebrated pigs at $5 each. Those whose orders are on register will have preference, but it is probable that after supplying them, a few will remain for sale. I. I. HITCHCOCK,
Sept. 16. American Farmer Establishment.

Printed by SANDS & NEILSON, South East corner of Calvert and Market-streets.

THE FARMER & GARDENER;

AND LIVE-STOCK BREEDER & MANAGER.

CONDUCTED BY I. IRVINE HITCHCOCK, AND ISSUED EVERY TUESDAY FROM THE AMERICAN FARMER ESTABLISHMENT, AT $5 PER ANNUM, IN ADVANCE

No. 22. **BALTIMORE, SEPTEMBER 30, 1834.** **Vol. I.**

☞This publication is the *successor* of the late
AMERICAN FARMER,
(which is discontinued,) and is published at the same office, at five dollars per year, payable in advance.
☞When this is done, 50 cents worth of any kind of seeds on hand will be delivered or sent to the order of the subscriber with his receipt.

American Farmer Establishment.

BALTIMORE: TUESDAY, SEPTEMBER 30, 1834.

A FAVOR ASKED.—Our files of the Farmer and Gardener are becoming exhausted for the very gratifying reason, that our subscription list has increased faster than we anticipated. Nos. 6 and 7 and indeed, all the Nos. from 5 to 14 are much wanted. Will postmasters who have any remaining in their offices, and subscribers or others who may have any of these Nos. to spare, send them to us by mail?—Such favors will be duly appreciated by their friend. THE EDITOR.

STEAM PLOUGH—WHY NOT?—One of the essential qualities of a good merchant is ENTERPRISE—the same may be said of the manufacturer and the mechanic—but the popular opinion among farmers seems to be, that a farmer must be as clear as possible of this mania for something *new*, as destitute as may be of the thirst for improvement which characterizes the present age. Hence nearly all the great improvements in agricultural implements and operations, all the applications of science to the business of agriculture have been invented, proposed and introduced by others than practical farmers. The aid of the printing press was, in this country, first brought to bear directly upon the agricultural interests by one who was not a farmer, and the same may be said of nearly every one of his successors and coadjutors in the same vocation. The inventors and improvers of farming implements have not generally been farmers, and most of the new grains, grasses and other agricultural objects of interest that have been introduced into our country from abroad, have been brought at the instance of others than practical cultivators. What is worse, nearly all improvements introduced or invented for the benefit of the first of interests, have encountered great opposition from those whom they were intended to benefit. For instance, agricultural periodicals, which, for real public utility, are second to no other class of publications, have been and still are stigmatised as "book farming." Machines for threshing grain, shelling corn, cutting and steaming food for domestic animals have been sneeringly called "yankee notions," and though adopted by a few, are still pertinaciously rejected by the mass of farmers. The real possessors of enterprise, however, still find it promotive of their interest to apply science and improvement to agriculture and its operations. One of the most obvious of these improvements, which can scarcely have failed to suggest itself to the mind of the thinking man, is the substitution of steam for animal power in the cultivation of the soil. Machines have already been constructed, and will doubtless be perfected, to be propelled by steam for simultaneously ploughing, harrowing, seeding and rolling the ground, and others for harvesting crops of small grain, with very great facility. Concerning a new steam plough, invented by Major Amos Tyrrell, Jr. of Genesee county, N. Y., the Batavia Times observes,

"We have seen the model of what is denominated a "Combined Wheel Plough," to be propelled by steam. The number of ploughs to be propelled, will depend on the amount of propelling power used. Two nominal five power engines will propel a carriage with five ploughs—and when cross ploughing for seed, will also carry a seeding apparatus and drag, performing the whole at one operation. It requires two individuals to manage the machine—a man and boy. Also, a boy, a horse, and a horse wagon, as a tender to supply coal and water as required—making a daily expense of a sum not exceeding five dollars. And at a reduced speed the machine will plough twenty-five acres per day—and if required, sow and drag it in at the same time.

We confess we know but very little of the power and application of steam—but we hazard nothing in saying, we think this machine, on fair and feasable ground will fully answer the design of its ingenious inventor—at all events we hope so."

And so do we—even if *this* invention does not succeed, we shall not be the less sanguine that at no distant day, the power of steam will be used not only to propel the plough, but to extract stumps and trees from the ground. In short, we hope yet to see a steam engine attack a forest, take up the trees and shake the soil from their roots like onions, stuff them under its boiler, plough and seed the ground, and all this at the rate of an acre an hour. Hurrah for the teakettle! succes to the steam farmer!

RYE GRASS.—We have had several inquiries concerning the success of this grass in our country, the kind of ground proper for it, the best time of sowing the seed, and the quantity required per acre. Will some gentleman acquainted with its culture *here*, give us the required information?

MARYLAND HORTICULTURAL SOCIETY.

A stated meeting of the Council was held on Saturday evening last, at which it was

Resolved, That an EXHIBITION of Dahlias, other Flowers, Fruits, Vegetables, &c. be held on the 14th of October next. Committee of Arrangement, Messrs. Thos. J. Edmonson, jr., Evan Thomas, S. Feast, John Feast, E. Kurtz, Gideon B. Smith, Dr. Cohen and Chas. E. Wethered.

Mr. Thos. Dixon presented one quart of very superior Lima Beans, and 4 Egg Plants measuring 21 inches in circumference.

Miss Lucy Gray exhibited a fine specimen of Lemon of her own cultivation.

Mrs. Emory presented specimens of the La Brilliant, Groombridge's matchless, scarlet Anemone, Purple Globe, Prince's Transcendant, and four seedling Dahlias.

Mr. Robert Sinclair, sen. presented the scarlet Turban, Cambridge Surprise, Le Brilliant, and superb Lilac Dahlias.

Mr. John Feast presented specimens of Tecoma Capensis, Camelina Cerulea, Dydema carpus Scabra, Cantua Coccinea, Maurandia Barclayona, and a variety of other Flowers.

Mr. Samuel Feast presented specimens of Ixora Rosea, Neriam Coronarium, Ruella Percisifolia, do. Formosa; Eugenia Myrtifolia; Erica Verticellata; Erythrina Christigali; Bouvardia triphylla, phlox accuminata, Amaryllis lutea; Zephyranthus Speciosus, Draco-cephalum Verginicum, Veronica Alba, Helcanthus Rugosa, Tea Roses, Kurtzia Lady Washington and Yellow; Dahlias, King Solomon, Liberty Cap, Queen of Sheba, Grandure Triumphant, Orange and Yellow, Mrs. Cohen, superb Royal, Beauty Surprise, with several others.

Mrs. G. W. Riggs exhibited three boquets of Flowers, consisting of several varieties of Roses, Salvia Splendens, Amarylis lutea, &c.

THE FARMER.

Reflections suggested by Dr. Patterson's Letters.—In a second letter from Dr. Thos. Patterson, dated August 25th, he said his crop of corn would fall short of his first estimate (40 bush. per acre) at least one fourth, in consequence of the drought. He now supposes he shall gather 30 bushels per acre.

His plan of managing his land is certainly a very good one. Where he turned in the old sedge in the fall of 1832, and planted corn in the spring following, as described in our notice last week, he states that when ploughing the ground for rye, after the corn crop, he found the broom sedge not more than half of it rotten; being turned up in this state, *and mixed in with the earth*, by the plough and harrow, it has the effect to turn the soil from a yellow or reddish color to that of a dark mould; and it gives the land, which is a sandy loam, a more firm and tenacious consistence. He estimates the effects of this half decomposed broom sedge to be equal on the crop of rye to 10 or 12 loads of stable manure to the acre, and to have increased the crop from 4 or 5 bushels to 10 or 12 per acre. This practice shows in a striking light the value of fermenting vegetable matter in the earth; and in all the details it accords with the principles of science. We know not whether Dr. Patterson has taken his views of agriculture from books or reflection, but from whichever source he may have derived them, his practice is essentially that of "*book farming*."

The fact of broom sedge thus changing the color, texture and fertility of the soil, when suffered to decompose under a covering of earth, shows the impolicy practised in clearing new ground by burning the leaves and vegetable matter found on the surface of the earth in its virgin state. If such vegetable matter were drawn into large heaps, and placed with alternate strata of earth, and the heaps made so large as to create a sufficient temperature by the fermentable mass, the decomposition would be rapidly accomplished, and the whole substance converted into a soluble matter, fitted to be absorbed by the roots of plants, and converted into their own substance. If the leaves in the woods, the briars, weeds and noxious vegetables, were gathered *before their seeds ripen*, and in such manner were reduced to a soluble state, and applied to the arable land, we should see fewer poor barren fields. But we shall be met with the question, who can take time for this? We will state a case for the farmer who cannot find time for such employment. Which is the better, for a farmer to prepare five acres of land, to fence it, cultivate it, and pay tax for it, and at harvest to reap twenty bushels of wheat, leaving his land poorer every crop, and so as to produce little or no grass while lying untilled; or on the other hand, to purchase one acre and cultivate it well, spending the time and expense which would be applied to the cultivation of the remaining four acres, in collecting manure for the one acre, and at harvest to reap thirty bushels of wheat, and to have the land left rich, and productive of grass during the intervening years of tillage? We think this a plain case—farmers should make it one of their leading objects through the year to *make manure*, and every other branch of business should be pursued in reference to this great object. If horses be not fed, they cannot work; and if vegetables be not fed, they will not grow.

Since writing the above, we have received another letter from the same gentleman, an extract from which we cannot refrain from appending, though part of it is similar to what we have already given. As to his injunction not to use his name, it came too late—our last number was already printed. But why should he thus restrict us? We certainly acknowledge his *right* to do so, but we think we are more disinterested judges as to the expediency than he, and we appeal to our readers whether better language than his is necessary for the object—so here goes.

"If you are going to say any thing about ploughing-in broom sedge, and other vegetables or weeds, I can only say, that I am delighted with the appearance of the fields I am sowing down now, in which the sedge has been ploughed down a year and upwards—it is so far rotted, that now being turned up to the air, and imbibing another portion of oxygen, &c. it will immediately furnish pabulum to the crop now sowing—the color of the soil is totally changed. I deliberately say, that it has furnished as much manure to the acre as 12 or 15 ox-cart loads from the stable. I have often remonstrated with farmers setting fire to, and burning off sedge, &c. from old fields about to be broken up for corn, &c.—they replied that broom sedge won't make manure, when in fact they never give it a chance of doing it. If it is even ploughed under, they immediately throw it up to the top by cultivating their corn, and the hot sun dissipates it to the winds. It takes from 12 to 15 months to rot. I have no doubt the best way would be to sow half a bushel or three pecks of plaster on it before turned under, and then after ploughing, to run a good, heavy roller over it; this would aid the crop, and promote the decomposition of the materials turned under. I have no doubt that those ploughs which turn the sod over flat are far more promotive of improvement of the soil than those which leave it set on its edge. I do think there is no one thing in which farmers in the lower counties of Virginia and Maryland err more, than in burning every thing off old fields before breaking them up. Manure is a very scarce article with poor farms or sections of the country.*

I have stated these facts and ideas—if you are about to publish any thing relating to the subject, you must use your own style; for I never have been in the habit of writing for the press, nor of writing with care. You may give me for any authority you please, but not my name or language.

To sum up the method which I have pursued with such success, (though hundreds may have practised the same) it is this:—Plough in broom sedge, and all the rubbish vegetables you can, in old fields, and sow rye; next year, after harvest, stir it well with the plough and harrow, sow down the second crop of rye; the next spring sow clover, and plaster it as soon as it is up and large enough, and you will succeed in setting your fields handsomely—whereas, if you sow seed on the *first* crop of rye, you may stand a great chance of losing almost the whole of the clover seed. You save labor, also, the second year; your ground is so loose that it is easy worked, and can be done no matter how dry the season is. I have lost much by sowing clover seed on the first crop, and in fact have not improved my soil so fast. The roller and plaster to be used as aforesaid.

Yours, with great respect,
THOS. PATTERSON."

For the Farmer and Gardener.

Agricultural Chemistry—No. 7.

Feldspar.—This important and widely distributed mineral, has, in most of its varieties, a structure very distinctly foliated. It scratches glass, and gives fire with steel, but its hardness is a little inferior to that of quartz. When in chrystals or chrystalline masses, it is very susceptible of mechanical division at natural joints, which, in two directions perpendicular to each other, are extremely perfect; but in the third direction, they are usually indistinct. Its specific gravity usually lies between 2.43 and 2.70. It is usually phosporescent in the dark. A specimen of green feldspar, examined by Vaquelin, was found to contain silex 62.83, alumine 17.02, potash 13.0, lime 3.0, oxyd of iron 1.0—96.85.

Feldspar presents, according to Jameson, 9 species, and several subspecies. The only one which is necessary for us to examine is *Clay*. It is supposed to be from the disintegration of this rock, that the clay which abounds in the alluvial strata of the earth is derived; of which, the Kaoline, or pure clay, used by the Chinese in forming their fine porcelain, is one of its species. This rock abounds in the neighborhood of Baltimore, and is an object worthy of being examined into by those who have it on their lands, as it may, ere long, become an object worth their attention to obtain it for the factories of the finer porcelain in this country.

Clay was formerly considered as a simple elementary substance, until Sir H. Davy succeeded in decomposing it, when he found it to consist of

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* Or rather, Doctor, are not poor farms a plentiful article where the making and saving of manure is misunderstood or neglected.—Ed.

a peculiar metalic base, united to oxygen. It has obtained the name of alumina, from its being generally obtained from alum. The purest native alumina, is found in the oriental gems, the sapphire and the ruby. They consist of nothing but this earth, and a small portion of coloring matter. Its specific gravity is 2.000, in a state of powder, but by ignition it is augmented. According to the analysis of Sir H. D. clay is composed of a metalic base called alumina 15, and oxygen 33. Clay has a strong adhesion for water, and its particles may be finely divided by it, and suspended in it; though it is not dissolved by water. When clay is sufficiently mixed with silex, and its particles minutely divided by the fine particles of sand, it is an important ingredient in the soil; but when it abounds in too great a proportion, it forms the coldest and most barren soil of all the different earths.

The great value of clay in the earth, is derived from its plastic quality, and its great adhesion of water. We have before observed of sand, that it absorbed caloric or heat, to a high degree, and parted with it rapidly; so clay, absorbs water with great readiness, but retains it long, and gives it out slowly, to be acted upon by the heat radiated from the silex. *Clay forms the crucible in the laboratory of nature, which is to contain the crude manures, out of which is to be concocted the food or plants; and the sand attracts and radiates the heat, thereby raising the temperature to that point which favors fermentation.* It is a generally received opinion, that these earths are taken up by the roots of plants without decomposition, and are carried the round of circulation, to be deposited in certain parts of the vegetable substance. This opinion is founded on the fact, that these earths are discovered in very small quantities in the ashes of vegetables, after they have been destroyed by fire. But is this fact decisive proof, that these particles of earth had been taken up unchanged, and carried through the course of circulation? I think not. These earths are now known to be compound bodies, formed by certain metalic bases united to oxygen, which constitutes by far the largest portion of their composition.—These primitive substances may be separated, and exist in a state of gas, and in that state they would possess less gravity than water. They will then be imbibed by water, and being lighter than that fluid, their natural tendency would be to ascend through the sap vessels in the pores of the woody fibre. But when silicum, the metalic base of sand, is united with oxygen, their union causes the volume to contract many hundred times, and the specific gravity of the compound to increase, until it is three times the weight of water, and consequently cannot be suspended in that element to be carried by the force of circulation to the tops of the highest trees, and be propelled through the interrupted cellular tissues of the leaves, and then be returned to the particular parts where it is found by the igneous decomposition. It would require great power in the circulating force to accomplish such an effect. And where can such a power be found in vegetable substances? It does not coincide with the laws of philosophy, or the simplicity of nature, to call in the aid of unknown causes to account for an effect, when we have present known laws sufficient for the accomplishment of the purpose. If we admit that the substances found in vegetables have been taken up in a fluid, or gaseous state, and that when they have been exposed in the leaves of the plant to the operation of light, heat, and electricity, that new combinations take place among the gases, oxygen and water are thrown off, their volume decreased, and that levity which had aided in their elevation to the top of the plants counteracted, by the increased gravity of the compound, which would cause it to descend by its own gravity; admit this to be the process of vegetation, (and it is not denied) and the phenomena of vegetation may be accounted for without difficulty, by known laws. But if we attempt to introduce the earths, sand, clay, lime, and plaster of Paris, &c. without decomposition, to become the food of plants to mount to the top of a tree through a medium of less gravity than themselves, then we find it necessary to call in the aid of some imaginary cause, that cannot be found or explained.

I have been led into this train of reasoning, by reason of the opinion which is generally entertained, and which has been handed down to us by the authority of great names, that plaster is a component part of certain vegetables, into which it enters without decomposition, and forms their necessary pabulum. Those who hold this opinion, account for the failure of plaster to benefit the crop, from the soil being already supplied with a sufficient quantity to afford the requisite supply, and consequently no addition can be useful; from the vicinity of salt water, or any other notion that happens to strike their fancy. But if we admit the reasoning I have advanced, it will lead us to look into the composition of the soil, and not into the vegetable for the cause of the failure.

If the plaster of Paris, which is a sulphate of lime, should not find in the earth to which it is applied, some substance for which one of its component parts has a stronger affinity than they have for each other, the plaster will remain undecomposed, and will not enter the roots of plants, or benefit their growth. I shall have future occasion to recur to this principle, and to explain it more fully.

I have said that clay, by its adhesive quality, forms what may be aptly called the crucible, in which the manure put into the ground is retained, and prevented from a too rapid decomposition and evaporation; and that sand collects and radiates the heat. From these two important operations, it may be easily understood how necessary it is to the constitution of a prolific soil, that these two kinds of earth should exist, in their due proportion; and where one predominates to excess, it points out the only appropriate remedy, that of supplying the deficiency by adding whichever earth is found wanting. E. A.

[From the Complete Farmer.]

FARMERS' WORK FOR OCTOBER.—*Ploughing.*

Stiff, hard, cloggy land intended to be tilled should be ploughed in autumn. Fall ploughing saves time and labor in the spring when cattle are weak, and the hurry of the work peculiar to that season presses on the cultivator. A light, sandy soil, however, should not be disturbed by fall-ploughing, but lie to settle and consolidate through the winter. Select your corn intended for planting next season from the field, culling fine, fair, sound ears from such stock as produce two or more ears, taking the best of the bunch. You will consider well, which is the best method of harvesting corn, and adopt one of the methods mentioned by Judge Buel. If the husks and bottoms of your corn, when stowed away for winter, are sprinkled with a strong solution of salt in water, (taking care not to use such a quantity of the solution as to cause mould) and when dealt out are cut fine with a straw-cutter, they will make first rate fodder. Do not feed hogs with hard corn without steeping, grinding or boiling it. The grain will go much the farther for undergoing some or all of these operations, and if a due degree of fermentation is superadded, so much the better.

THE BREEDER & MANAGER.

[From the Library of Useful Knowledge.]

THE SHORT-HORNS.

Lincolnshire.—Mr. Berry has disposed of the Lincolnshire cattle in a very summary way, and we apprehend that no appeal can be made against his decision. 'There is a large coarse short-horn prevailing, particularly in Lincolnshire, denominated in the quotations of the Smithfield markets "Lincolns," but they have no further affinity with the improved short-horns than as the latter have been referred to for their improvement, which has been accomplished to a considerable degree.' As, however, we have to travel through each of the counties of Great Britain, we must enter a little more into the consideration of the character and claims of the Lincoln cattle.

Many of the present unimproved Lincolns may be regarded as fair specimens of the best of the old Dutch cattle. So prevalent is the opinion that this was the origin of the breed, that the metropolitan butcher denominates them Dutch cattle, and knows them much better by that name than as Lincolns. There is a coarseness about the head and horn which we have not seen either in the common Holderness or the improved Durham; the bone is comparatively large, the leg high, and the hips and loins wide, approaching to raggedness. Mr. Lawrence has a very appropriate remark respecting them, that they demand that Bakewellian improvement which their sheep have received.

There have been some zealous, and, to a considerable degree, successful improvers of this breed. At the head of them stands Captain Turnill, of Reesby on the Wolds. With what materials he went to work is not certainly known, but it is supposed that he confined himself to a selection from the native breed; and certainly he produced a valuable animal, thinner in the horn, cleaner in the bone, lighter in the dewlap, shorter in the leg, full in the bosom, and round in the carcass. The breed was properly called 'the Turnills,' and they yet remain in the hands of many farmers. They are handsome-looking beasts, always full of lean flesh; with far greater disposition than before to put some fat on that flesh, and become sooner ripe for the market.

Others, with somewhat more judgment, called

in the aid of the Durhams, and more speedily and effectually completed their object. They took away the disposition to make lean beef only, although in very great quantities; and if they could not perfectly give to the Lincolns their own early maturity, they materially quickened the process of fattening. An improved Lincolnshire beast is therefore now a very valuable animal; and if a finer grain could be given to the meat, the greater quantity of muscle, compared with that of fat, would be no disadvantage.

We are indebted for the following account of the management of the Lincolnshire cattle to Mr. Shield of Fordston, and who, as a genuine Lincolnshire man, is much attached to the Turnill breed.

'After leaving the hand, or the cow, the young cattle are kept during the first winter on hay, hay and turnips, or sometimes hay and a little oil-cake. In the next summer they run on seeds or second-rate land, and too often get nothing but straw in the winter. At two years old they go on worse keeping, and are again wintered at straw. At three years old they fare no better, except that some now give from two to four pounds of oil-cake daily; and they are sold, in the spring or summer, by those who have not the means to feed them, to jobbers, who dispose of them to the grazier. He winters them better if he buys them at the latter end of summer, and feeds them off before another winter; but if they are bought in the spring they are generally fed off before winter, many of them being put up for stall-feeding, to which no breed is better adapted.'

The Lincolnshire cattle are principally red and white, but a dun variety was introduced, about the middle of the last century, by Sir Charles Buck, of Hamby Grange, and which have so much improved in size as almost to overtake the common breed of the county. They are found principally in the neighborhood of Folkingham, and have been fed up to 116 stones at seven years old.

The extraordinary animal which was exhibited under the name of 'the Lincolnshire ox,' although bred in that county, was an improved short-horn; and many of these are establishing themselves in every part of Lincolnshire.

Here, as in most other districts, there are great varieties of breeds, and which are said to be increasing, and even interfering with the purity of the native one, by means of the great annual importations of Irish cattle.

Some have purposely and very recently endeavored to establish a cross between the best of the long-horned Irish and the short-horns of the county; but the attempt, although promising some success at first, has decidedly failed.

Among the small farmers, half-horns of every size and variety are found, and they are crossed in every way that caprice or folly can suggest, yet they are most of them good milkers. The Lincolns, although better adapted for grazing than for the dairy, yield more milk, and of a richer quality, than some of the advocates for the old order of things are willing to allow.

A great number of the Yorkshire cows destined for the metropolitan dairies halt in Lincolnshire, and many cattle from the north, as well as numerous herds of Irish beasts, are prepared for Smithfield market.

Essex.—There is no distinguishing breed in this county; but the chief agricultural business, so far as cattle are concerned, consists in the suckling of calves and grazing in the marshes, with some attention to the dairy in particular districts.

Our friend, Mr. May, veterinary surgeon, at Maldon, informs us, that the suckling farmers procure their calves at the principal markets, viz. Romford, Chelmsford, Maldon, Braintree, and Colchester. The Romford market is chiefly supplied from London; Chelmsford and Maldon from London and Suffolk; and Colchester and Braintree chiefly from the Suffolk dairies.

They are brought in at from a week to a fortnight old, and are generally fed about twelve or fourteen weeks, when they are either bought by the butchers in the neighborhood, who kill and dress them, and send them to the London market, or they are sent alive to the Romford and Smithfield markets, where they are purchased by the London butchers.

Many of these calves used to be reared in the rich pastures of Essex, and particularly the heifer calves from the metropolitan dairies; and many a cow went from Essex to keep up those establishments; but this practice is now almost totally discontinued.

The marshes afford excellent grazing for cattle that are not affected by the brackishness of the water, and there are few who suffer materially by this. When cattle are not perfectly ready for the market, a few weeks' grazing on the marshes will bring them rapidly forward. Some are purchased in store condition, in order that they may run three or four months on this luxuriant pasture, and at the expiration of the time they are ready for Smithfield. At some periods of the year these flats are covered with cattle, chiefly of a small kind, and mostly the Welsh or Scotch runts; indeed the grazing is principally confined to these small cattle. A few farmers, however, in every part of Essex, apply themselves to the regular grazing of cattle of a larger size. A few have the Devons, among whom must be reckoned Lord Western, who is partial to these cattle, both to feed and for the dairy. When they are grass-fed, there are always some Scotch or Welsh runts as *trimmers*, i. e., to eat down what the larger and more valuable cattle leave. Many Herefords are prepared for the London market in the same manner.*

The dairy business is confined to a comparatively small part of the county. A considerable quantity of butter is made in the neighborhood of Epping, and sent to the metropolis in small rolls; and it is deservedly celebrated for the peculiar sweetness of its taste. This depends not on the kind of cow, for occasionally a dairy contains half a dozen different breeds of cows, although the short-horns are the most prevalent, but because they feed during the summer in the shrubby pastures, of Epping Forest, and the leaves of the trees, and of numerous wild and aromatic plants which there abound, impart to it its peculiarly sweet flavor. The consumer, however, can seldom be certain that he has the real Epping butter, for a very fair imitation of it is sent up from Northamptonshire; and the London retail-dealers wash the salt well out of the Cambridge butter, and, forming it into rolls, sell it for Epping butter; while a few are more impudent, and sell almost any kind of butter as true Epping.

Attached to the dairy is another business, to which we shall have occasion more particularly to allude in another volume of our work, namely, the fattening of pigs, and the preparation of sausages. The skim-milk is devoted to this purpose. Although the milk is always sour before it reaches the troughs of the pigs, they thrive well, and their fat is firmer than that which is procured from others that are fed with pease or meal. This will not, however, appear surprising, when it is known that all the caseous principle of the milk, or that which would produce cheese, is retained in it.

Middlesex.—There is no distinct breed in this county, and a very small portion of the land is applied to the fattening of cattle for the butcher, for the produce from it procured in other ways can be sold at a much higher sum, and would render the system of grazing a losing business.—Some land, however, is necessarily devoted to the temporary keep of cattle, as they journey to and from Smithfield, or while they remain unsold from one market-day to another; and a great many cattle are prepared for the market in this county, and more than would be readily supposed before the circumstances of the case are explained.

In the first place, at least 12,000 cows are kept in the different dairies in the metropolis and its immediate neighborhood. These are all short-horns; and since the rapidity with which they can be fattened has been established, few dairymen breed from their cows, but they are fattened and sold as soon as their milk is dried. This will bring 5,000 or 6,000 cows annually into the market.

There is an enormous consumption of fermented liquor and ardent spirit in London, besides what is sold from the breweries, and sometimes from the distilleries, to the regular dairymen.—This is chiefly distilled from grain, and the refuse is employed in the fattening of at least 6,000 or 7,000 more head of cattle.

Booth's establishment for the fattening of cattle will afford a fair sample of the rest. It is attached to their distillery at Brentford. The account of the building is chiefly taken from the Farmer's Magazine, an excellent agricultural publication, edited by Mr. Berry. 'The building is 210 feet long, and 180 wide. The side walls are about 10 feet high, with 20 windows on each side, and 8 windows at each end, unglazed, but opened or shut at pleasure. It is lighted by glazed sky-lights in the roof. The roof forms one ridge, and the centre part of it affords space for an ample hay-loft. It is supported by numerous cast-iron and wooden pillars, which, at the first entrance of the observer, have the appearance of a forest of columns. A passage of 6 feet in width extends round the whole building, and between every two rows of cattle are passages of

* These cattle, both large and small, are usually made fresh upon the marshes, and then tied up to hay, turnips, mangel-wurtzel, and oil-cake.

the same width. The whole is lighted at night by 36 gas-lights.

'The cattle stand in double stalls, 7½ feet wide, and the space from the manger to the gutter behind the cattle is about 10 feet: the gutters have an inclination to one end, where are drains to carry off the contents of the gutters.

'There is a common manger, which extends the whole length of each row of cattle, the bottom of which is on a perfect level; but opposite to each beast is a second manger, placed in the first, and elevated three or four inches from the bottom of it, and being about a yard in length; and into which are put the grains and other solid food, the common manger being for the reception of the wash, or any other liquid food.

'The wash is kept in a cistern or tank, above the level of these mangers, and in a different part of the premises; but pipes from this tank are conducted beneath the floor of the building, and communicate with these mangers by means of a distinct cock for each, so that, by turning, the cattle in, any one of the mangers, are instantly supplied with wash. This liquid serves them, in a manner, for food and drink, as it contains the finer particles of the ground malt, and the greater part of the barley meal used in the mashing process.

'The grains are kept in pits, about 12 feet square, and 10 or 12 feet deep, somewhat narrower at the bottom than the top, and lined with brick set in cement. They are trodden in, and raised like the roof of a house, and covered with road-stuff, to exclude the air, and protect them from the weather. Little or no litter is used, and no green food or uncut hay is ever given. Oil-cake is seldom used, it being found that rough clover chaff, mixed with the grains and wash, will fatten to any extent.'

The metropolis is the grand mart to which a considerable proportion of the fat cattle from every part of the kingdom is sent. In the year 1830 there were sold in Smithfield 159,907 cattle, 1,287,071 sheep, 254,672 pigs, and 22,500 calves, for the supply of the metropolis, and the villages and towns within a circuit of eight or ten miles, and occasional contracts for the navy. Besides this there is a great quantity of dead meat sent up from the country, generally speaking perfectly wholesome, and fairly and honestly slaughtered, although it is said that the flesh of some animals that did not come by their death through the hands of man, has occasionally found its way to Newgate market. There are inspectors appointed, who very impartially look after this. This is called the dead market, and may be fairly set against the consumption of the places in the neighborhood of London, and also the irregular demands for the navy, so that the numbers just stated may be considered as fairly representing the consumption of animal food in the metropolis, exclusive of fish, poultry, and salted provisions.

From the American Turf Register.

Ringbone in Horses.

Frederick, June 5, 1834.

Mr. Editor:—I have never heard of any cure for Ringbone in horses; if any of the readers or subscribers of your useful Register, could give some information on the subject, it would be thankfully received by one of your

— Subscribers.

Baltimore, June 13, 1834.

Mr. Editor:—One of your Frederick subscribers is desirous of knowing whether there is a cure for ringbone. And as you have referred the question to me, I answer, that as a specific, (if the question applies to the term,) I know of none, and in the term when applied to medicine, I am wanting of faith.

As the answer to the question, will meet the eye of the public, I think proper to state what ringbone is, and what are its causes; as in so doing your readers may better judge what probability there is of a cure.

The cause of ringbone is fourfold: 1st. It is hereditary. 2d. Strains. 3d. Bruises. 4th. Wounds. Before I proceed farther, I will notice that ringbone and spavin are one and the same disease, and that their situations first gave rise to the two names, their causes and treatment are the same. Whichever of the four causes may produce the disease, the first effect is inflammation, which extends to either the periosteum, which is the membrane covering the bone, or to the cartilages of the joint. While the disease is only inflammation and confined to the periosteum, a cure is not certain but may be expected; when it extends to the cartilage, it is doubtful if a cure can be effected.

Inflammation of the periosteum excites the lymphatic vessels to increased action, so as to take up a portion of this membrane by absorption, and in its place, and by the arteries, ossific matter is deposited, which in time becomes bone, and in length of time, and continued deposites, from the enlargement, constituting either ringbone or spavin. At the end of bones forming a joint are placed glandulous cartilages, which secretes the synovia or joint oil; these cartilages when inflamed, secrete less synovia than is usual in a healthy joint, consequently more or less friction is given to parts which ought to have none, and this friction as it becomes an additional cause of a diminished quantity of secretion, becomes the source of greater irritation; as this state of things goes on, the cartilage either becomes absorbed, and in its place ossific matter thrown out, or by the action of its vessels, what was cartilage in a healthy state, is become bone, and anchylosis (a stiff joint,) is the result.

Without further detailing on the progress of ringbone, I think I have said enough to shew that if a cure is to be made, the best time is while the disease is in its recent state. And therefore, if on the seat of ringbone, and in the early stage of lameness, inflammation is discovered, it is advisable to poultice the part with a common Indian meal poultice, applied once a day for about two weeks, after which, blistering, a first, second, or even a third time may prove beneficial; should this course fail, firing may with propriety be tried. Yours, respectfully, John Haslem,

Veterinary Surgeon.

The great Jeremy Taylor said "he was not afraid of the ugly visors which men put upon those whom they hate."

Big Head in Horses.

Jefferson Barracks, Missouri,
April 16, 1834.

Mr. Editor.—In a letter I sent you, a short time ago, I stated in a postscript, that the "Big Head" in horses, proceeded from the growth of the roots of the teeth. I have this fact from a gentleman in this county, who informed me that he had carefully examined the head of two horses after death, and satisfied himself of the truth. He could give no reason for the growth of the *roots of the teeth.* T. P. A.

Horses Food—Barley was the ancient food for horses, the discovery of oats being comparatively of modern date. In the north of Holland, they feed their horses principally on black, sour bread, made of buck wheat, (and there it is eaten also by a large share of the inhabitants,) for which purpose, they alight from their vehicles, and, without taking the horses out of their hempen traces, cut it in slices, and give it to them to eat. They appear relaxed by it, but apparently it does not debilitate them, as they seem to do their work very well.—*Cyclo.*

THE GARDENER.

[From the Southern Agriculturist.]

Extracts from an Anniversary Address, delivered before the Horticultural Society of Charleston, July 10, 1834; *by* Henry R. Frost, M. D.

Gum Arabic, which is in such common use, is secreted from the sap of the genus Acacia, a tree growing in Arabia. It exudes, in a liquid state, from the bark of the trunk and branches of the tree, in a similar manner to the gum procured from the cherry tree of this country. In a little time it becomes hardened and is collected.

India Rubber, or gum elastic, is furnished from the milky secretion of several trees, which is procured by making incisions into the trunk. As it exudes it is collected on the surface of moulds of clay of various shapes. It hardens and becomes black upon exposure to the air, and when obtained in sufficient quantity, the moulds are beaten to pulverize the clay, which is then shaken out.

The most extraordinary production from the sap is afforded by the tree called the Cow-tree, (*Bassia butyracea*) from the circumstance of a milky fluid flowing from it. It is described by Humboldt, who informs us that it grows in rocky and unfruitful districts, little cultivated for any purposes. For many months of the year it is not moistened by a single shower. The branches appear dead and dry, but when the trunk is pierced, there flows from it a sweet and nourishing milk. At sun-rise the vegetable fountain is most abundant; and at this time, the natives are seen hastening from all quarters, furnished with large bowls to receive the milk. From this substance butter has been made.

A plant no less singular has been discovered, which furnishes a wholesome and limpid water. It has recently been found in the countries lately added to the British empire in India. The fluid flows from the stem of the plant when cut,

and the natives are said to be well acquainted with this remakable property.

From the returning sap is also furnished the volatile oils, which give fragrance to many plants, as mint, sage, rosemary, lavender, &c. In these, the volatile oil is contained in vesicular glands, which abound in all parts of the plant. These glands break spontaneously, or are otherwise ruptured; when the volatile oil, which they contained, is diffused into the air, and gives to it an aromatic smell.

From the juices of the Bamboo and Teak-tree, a substance resembling flint or silex is secreted, and is to be found in the varieties of the cane; in some of the grasses it is distributed on the surface.

Such are a few of the many examples which might be adduced of changes in the composition of the sap, in its progress through the vegetable system. These examples might be much increased, by referring to the varieties of fruits and seeds, in all of which the utmost care is manifested in the protection of the embryo or young plant, and the most delicate food provided for its support, until capable of procuring it by its own resources. It is these substances which man has seized upon, and has converted to the relief of his many wants, which instinct seems to have taught, to be in many instances particularly well adapted to his nature. Thus is the chain of dependence established, and plants become the laboratories in which is prepared the food for animals. So true are the words of scripture—"all flesh is grass." The grass fadeth, and flower withereth, but the glory of the Eternal one remains forever.

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Consider only what cultivation accomplishes every day, and you will be convinced that its influence is no less felt and exhibited in the vegetable, than in the animal system. Who would suppose. that the pleasant *plum* was derived from the sour *sloe*, or the *golden pippin* from the austere *crab-apple* of the woods—that the common *colwort*, by culture, continued through many ages, appears under the improved and more useful forms of *cabbage*, *savoy* and *cauliflower*. *Celery*, is but *parsley*, in an advanced state of cultivation. *Asparagus*, in its natural condition, can scarcely be recognized as the same article, which, when domesticated, is a table luxury. The *potato*, insignificant and uninviting in its natural state, by cultivation through a term of years, has become the food of millions of our race. Let us then persevere; the good fortune of some of us may lead to such results, as may prove of infinite advantage to mankind.

[From Wilson's Economy.]

FALL DRESSING OF ASPARAGUS BEDS.

About the beginning of November, when the tops become yellow, cut the whole off close to the ground, and deposit them in some convenient place to rot; hoe up and rake off from the surface of the beds and alleys all weeds, and turn them in with the tops, to rot also. Every other year at least, the beds would be the better of manure, and this is a good time to apply it. Cover the surface of your beds, therefore, one or two inches with well rotted short manure, or other compost, and point the whole lightly over the surface an inch or or two deep. The alleys may be covered deeper with coarser manure—and the management of them is an essential point in the culture of asparagus, for from them the beds are continually to receive additional renovation. Therefore, after they are all well covered with good strong manure, they should be marked out by the line and spade, eighteen inches for the outside ones, and two feet for the others. Then at the end of one of the two outside alleys, its end to a length of two feet, and a depth of two spades, shovellings and all, must be taken out, and deposited opposite the end of the next two feet alley. The dung, also, to a distance of other two feet, must be removed to the end of the alley with that first removed—then the upper spit turned into the bottom of the first opening, and the fine shovellings below it thrown upon one half of the bed, to a thickness of one or two inches. On the top of the next spit will be the layer of dung deposited on the first trenching; and that, with the bottom spit, must be turned upon the top of the first opening. The next two feet of dung must be turned into the bottom of the second opening, as also the upper spade full of earth; the shovellings upon the top of one half of the bed, and so on, to the end. The next alley must be opened at the end where the first alley is ended, and its opening closes it; and is itself closed at the other end by the opening of the first. The shovellings between the first and lower spit of this, and all the two feet alleys, must be spread alternately to the right and left, on one half of each bed, and their openings and closings effected in the same manner. The beds will then be in good order for winter. Yet if those who live near the shore, could add an additional covering over all, at least the beds, of rock or sea weed, to a depth of several inches, it would be of much advantage to the plants. Any kind of long litter would be good; still the beds will sustain no injury, although it should be inconvenient to apply either of the two last, provided the first operations are duly performed. And in whatever year the first operations are dispensed with, the second, of covering well, must not on any account be omitted.

An Essay on the Soils and Composts indispensably neccessary in the propagation and culture of the more rare and valuable Ornamental Trees, Shrubs, Plants, and Flowers, of the Pleasure Garden, Flower Garden, and Greenhouse Collection.—BY THO. HAYNES, *London.*

On contemplating the immense variety of Ornamental Trees, Shrubs, and Plants, of which the British collection in its present increased state consists, the productions of different climes, soils, and situations, which have been procured by the diligent hand of the persevering Botanist, and perfected and matured by the indefatigable attention of the connoisseur, it must be easy to conceive the necessity of due regard being paid to the natural soils of these almost innumerably various productions, natives as they are of the most opposite situations and climates of the world.

The productions of nature are uniformly varied as her soils: common observation shews, that the willow, and other aquatic trees and plants, cannot thrive on the mountain or rock, nor saxatile plants in watery situations, evidently because they are opposite in habit and constitution, and it would be vain to thwart nature in her great and original designs. All trees, shrubs, and plants, will be found to succeed only in proportion as we follow nature's dictates in the cultivation of them; but she may be materially aided in many instances by the skill and ingenuity of man, although attempts to divert her entirely from her course must argue the highest presumption.

From such considerations, the necessity at once appears of our endeavouring to provide the trees, shrubs, and plants, we wish to propagate, with their native earths as much as possible; or with genial composts, as the best substitute where the original soil cannot be obtained. Upon this principle the gardener, with a view to improve the quality of his esculent crops, and the farmer in his gramineous productions, will cultivate only those species which nature has best adapted to his soils. In horticultural pursuits, the same attention is required to suit the soil to the plant and every attempt at perfect cultivation would be vain, where this particular object is neglected.

In situations where the original soil cannot be obtained, ingredients to form proper substitutes by compost may generally be provided; and the quantites required being frequently but small, they may be procured, and compounded at a small expense. Whereas in propagating or cultivating trees, shrubs, plants, and flowers of any description, in soils which are ungenial to their growth, unsightly and deformed productions are the certain result, which a regard to the article of soil will in most cases effectually prevent.

It may be expected that the generality of gardeners, especially those who are intrusted with the care of a collection of plants, are furnished with a competent knowledge of these soils; but this can never be reasonably looked for where the different natures and constitutions of the plants we cultivate are not fully understood, a competent and general knowledge of which, it is presumed, is the lot of but few, even among the most experienced. This species of information nurserymen, for obvious reasons, are not apt to communicate very freely, and yet practical men alone are in possession of it.

Considerations of this nature have given rise to the Essay now offered to the public notice, which is the result of long experience in the cultivation of plants of every description, upon a very extensive scale, and cannot fail, it is thought, to be acceptable to the numerous class of amateurs and gardeners, for whose use it is designed—the Author, impressed with a conviction of the importance of the advice he offers, feels satisfied, that the directions he has given, will be duly appreciated by the judicious cultivator, and is sanguine in his hopes, that the work may prove extremely useful to his fellow labourers.—Beyond this he has no ambition, his pursuits have not been favourable to literary correctness, and aware of numerous errors, he solicits the indulgence of the candid critic on this score.

[From the New American Gardener.]

GARDENERS' WORK FOR OCTOBER.—The young cabbage plants, produced from seeds sown last month, and intended for early summer cabbages, should be transplanted into the beds in which they are to remain during the winter.

Prepare a bed for them, the width of your garden frame, in a warm, well sheltered place, where the sun has the greatest power; yet be careful never to admit the direct sunshine on the plants, when in a frozen state. When you have no glasses, the plants may be protected during winter by boards or mats, giving them air in mild weather. Cauliflowers sown in August or September should be raised carefully, and protected, during the cold season, in garden frames, with boards, mats, &c., or perhaps some may survive if set in open borders, or they may be set in pots. Weed and thin your late crops of spinach, leaving the best plants at the distance of three, four, or five inches asunder. Early in the month, hoe and earth up the late-planted crops of cabbages, broccoli, and borecole, cauliflowers and other plants of the brassica genus. Towards the end of the month, if the stalks of asparagus turn yellow, cut them close to the earth; clear the beds and alleys from weeds, and carry them with the stalks off the ground. It will then not be amiss to cover the beds and alleys with old litter, well trodden down, to be removed in the spring—or you may apply manure now, instead of in spring. Cut down all decayed flower stems, and shoots of the various kinds of aromatic, pot and medical herbs, close to the plants; clear the beds from weeds and litter, and carry the whole off the ground. Onions may now be planted out to raise seed, instead of setting them in the spring. The seeds of dill, skirret, rhubarb, sea-kale, may now be sown; for, if kept out of ground till spring, many of them will not vegetate till a year after; but when sown in October or November, if the seeds are fresh and perfect, they will vegetate in the April following. Begin to take up and secure potatoes, beets, carrots, parsneps, turnips, Jerusalem artichoke, &c. Give a general hoeing and weeding to all your crops, and carry the weeds out of the garden. Such spaces of ground as are now vacant should be dunged, dug, or trenched, and thus have the advantage, of a winter fallow, and that exposure to frost, which will reduce it to fine tilth, and destroy worms, the larvæ of insects, &c. The old beds of strawberries should, some time in this month, be cleaned from weeds, and the vines or runners taken off close to the plants. Then, if there be room, loosen the earth to a moderate depth between the plants, taking care not to disturb the roots. And if the plants are in beds with alleys between, line out the alleys, and let them be dug a moderate depth, breaking the earth very fine, and spreading a sufficiency of it over the beds, between and round the beds, taking care not to bury their tops. A slight top dressing of compost, may now be applied. It may now be time to gather and preserve apples and pears, though it is best to let them remain on the trees as long as they are safe from frost. If you are not apprehensive of the depredations of mice, rats, squirrels, &c. you may sow the stones of plums, peaches, nectarines, apricots, &c.; or you may, if you think it more prudent, preserve them in sand till March or April.

THE BENE PLANT.

I am a southron, Mr. Hitchcock, 'born and bred,' and am only now on a visit to your "monumental city;" but having no predilections for geographical lines of demarcation, and considering *every* section of the UNION as my country, I feel happy and willing whenever it may be within the compass of my poor efforts to produce a general useful result—to aid, especially, the objects and purposes of your valuable paper—those objects and purposes being, to make a "blade of grass grow where it never grew before;" and besides *such* an agricultural *desideratum*, to incorporate with your native vegetable productions those of other climes, to which the soil of this state may be adapted; or, if not so, to receive in proper time, and with careful cultivation, naturalized habits, as hardy in relation to latitude as some of your indigenous plants. As illustrative of this, we see the tomato, okra, egg-plant, canteloupe, and water melon, in perfection, from Jersey to this city. A quarter of a century ago it would not have been believed that either of those fruits and vegetable luxuries could have been now as they are, as cheap and as common in the sections to which I have reference, as in our southern markets; I mean particularly those of South Carolina and Georgia. A constitution may be given to plants in localities where it has been supposed they could not attain maturity. An accidental experiment with a bag of rice of the red description, brought from Africa, introduced that staple of S. Carolina and Georgia; and another equally speculative, introduced the cotton plant into Georgia, which has become the richest and most valuable production of southern agriculture. The rearing of the sweet orange, in all its varieties, with the lime and lemon, the purple fig, and the luscious grapes of France, rapidly followed; and the cultivation of the sugar cane promises in time, when it has acquired a constitution derived from our short period of summer heat compared with that of the West Indies, to become also a staple of Georgia, co-extensive in the United States, as to consumption, with that of cotton. These successful experiments having baffled all anteceden hypotheses, as to fitness of climate and soil—particularly climate—for certain of nature's riches gifts, I feel confident, sir, that many other of our plants and vegetables might, with proper attention to localities, be produced as plentifully in Jersey and the Eastern Shore of this state, as they are now found in Georgia. Without mentioning any other at present—which I shall reserve, should *this* be acceptable, for further communication—I feel confident the *Bene* plant would flourish and thrive wherever the okra and tomato are now raised,—with this difference, that the *Bennet* thrives and grows best on a poor sandy soil, not quite strong enough for the okra. From the *Bene* seed the purest oil in the world is expressed. It is acknowledged by all foreign and domestic epicures, to whom opportunities have been afforded to try it, that it is superior to the finest olive oil, for *all* the purposes to which that foreign oil is applied; and superior in another important particular, it never becomes rancid—like Madeira, the older it is, the better. Mr. Milledge, a former Governor of Georgia, sent a bottle of the *Bene* oil to Mr. Jefferson, or to some other high functionary of Government, who unhesitatingly pronounced it superior, in *all* its qualities, to the olive.—We only want a proper machine in Georgia to express oil from the diminutive *Bene* seed, to supersede, in the course of a few years, the use of every other oil for domestic purposes. A visit from, with the 'cute' observations of, a citizen "away down East," would soon "find out the way," not only to enrich himself with a patent, but to receive the thanks and plaudits of the whole south. A GEORGIAN, *in transitu.*

MISCELLANEOUS.

BAIT FOR RATS.—One of our subscribers informs us, and his veracity is unquestionable, that he was advised in baiting a wire trap to catch rats, to mix a paste of corn meal and eggs; he did so, and the first night he caught seven, the second night the trap contained 14—from half grown to full grown ones. To use his own words the trap not being very large, "they were literally piled on one another for want of room." Rats are the most destructive, troublesome and disagreeable vermin that can infest our premises, and any thing is of importance that will assist us in getting rid of them.—*Ohio Farmer.*

"*Cheap and durable Paint.*"—It has long been a desideratum to save the great expense of oil and lead in outside painting, but hitherto it has not been obtained. Last summer, while travelling in company with an intelligent lady from New Haven, we obtained from her the following recipe. She said she felt it her duty to spread the information, having seen it tested. We have tried it; and those who feel interested may satisfy themselves by examining a piece of fence on our premises, painted with the composition. It is of a cream color, but bleaches, and is now (five weeks) nearly as white as lead paint.—There appears to be an adhesive, solid body, which has been unaffected by storms. How it may appear a year hence, we of course cannot say—but have strong confidence in it. The expense of the materials is about one fifth of oil and lead.—*Keene Sent.*

"To one gallon of good milk, add two dozen eggs, and 1½ pounds of loaf sugar—then add sifted slacked lime, (white) to bring it to a proper consistency. To be put on the same day. It will be well to run the whole through a paint mill, or otherwise to see that the courser particles of the lime are well dissolved.

TO KEEP OFF OR DRIVE AWAY BED-BUGS.—Make a strong decoction of red pepper, when ripe, and apply it with a common paint brush to the joints of the bedsteads, wainscoting, &c. where these odious insects usually resort, and it will speedily kill or expel them.

CONTENTS OF THIS NUMBER.

A favor asked—Steam Plough—Rye Grass—Horticultural Society's Report—Reflections suggested by Dr. Patterson's letters; Letter of Dr. Patterson—Agricultural Chemistry—Farmer's work for October—The Short-Horns, continued—Ringbone in Horses—Maxim of Jeremy Taylor—Big Head in horses—Horses Food—Extracts from Dr. Frost's address—Fall Dressing of Asparagus beds—Essay on soils and composts for shrubs, plants, &c. —Gardener's work for October—The Bene Plant—Bait for rats—Durable Paint—Bed-bugs.

BALTIMORE PRODUCE MARKET.

These Prices are carefully corrected every ONDAY.

	PER.	PROM	TO
BRANDY, Apple,	gallon.	$0 36	$—
Peach,	"	75	—
BEANS, white field,	bushel.	—	—
BEEF, on the hoof,	100lbs.	4 50	5 00
CORN, yellow,	bushel.	65	66
White,	"	65	66
COTTON, Virginia,	pound.	12	13½
North Carolina,	"	11	14
Upland,	"	14	15½
FEATHERS,	pound.	35	38
FLAXSEED,	bushel.	1 25	—
FLOUR—Best white wheat family,	barrel.	6 50	7 00
Do. do. baker's	"	5 75	6 25
Do. do. Superfine,	"	5 00	5 25
Super Howard street,	"	5 12	5 25
" " wagon price,	"	5 00	5 18
City Mills, extra,	"	5 25	5 37
Do.	"	5 00	5 25
Susquehanna,	"	5 25	—
Rye,	"	—	—
GRASS SEEDS, red Clover,	bushel.	4 50	5 50
Timothy (herds of the north)	"	3 00	—
Orchard,	"	3 00	3 50
Tall meadow Oat,	"	2 50	—
Herds, or red top,	"	1 25	—
HAY, in bulk,	ton.	16 00	17 00
Pressed,	100 lbs	60	65
HEMP, country, dew rotted,	pound.	6	7
" water rotted,	"	7	8
LIME,	bushel.	31	33
MUSTARD SEED, Foreign,	"	4 50	5 00
Domestic,	"	5 00	6 00
OATS,	"	33	35
OIL, linseed,	gallon.	—	92
Castor	"	1 62	1 75
PEAS, red eye,	bushel.	—	—
Black eye,	"	—	—
Lady,	"	—	—
PLASTER PARIS, in the stone,	ton.	—	2 81
Ground,	barrel.	1 37	—
PALMA CHRISTA BEAN,	bushel.	1 50	—
RAGS,	pound.	3	4
RYE,	bushel.	65	67
TOBACCO, crop, common,	100 lbs	3 75	5 00
" brown and red,	"	5 00	7 00
" fine red,	"	7 00	9 00
" wrappery, suitable for segars,	"	6 00	12 00
" yellow and red,	"	8 00	12 00
" yellow,	"	13 00	17 00
" fine yellow,	"	15 00	25 00
Seconds, as in quality,	"	3 50	5 00
" ground leaf,	"	5 00	9 00
Virginia,	"	4 00	—
Rappahannock,	"	—	—
Kentucky,	"	4 00	9 00
WHEAT, white,	bushel.	1 05	1 13
Red,	"	90	1 03
WHISKEY, 1st pf. in bbls.	gallon.	32	34
" in hhds.	"	30	30½
" wagon price,	"	29	30
WAGON FREIGHTS, to Pittsburgh,	100 lbs	1 50	1 75
To Wheeling,	"	2 00	2 25
		washed.	*unwash*
WOOL, Prime & Saxon Fleeces,	pound.	50 *to* 60	24 *to* 26
Full Merino,	"	44 50	22 24
Three fourths Merino,	"	37 44	22 24
One half do.	"	33 37	21 22
Common & one fourth Meri.	"	30 33	18 20
Pulled,	"	28 31	18 20

SUBSCRIBERS can have their volumes of the AMERICAN FARMER neatly half bound and lettered at this establishment, at 75 cents a volume. Most of the Nos. can also be had at 10 cents each, to complete files.

NEWFOUNDLAND PUPPIES.

SEVERAL fine DOG PUPPIES of this variety, the produce of a very valuable pair, recently procured from Philadelphia—may be had at $10 each, on application to I. I. HITCHCOCK,
Sept. 16. American Farmer Establishment.

BALTIMORE PROVISION MARKET.

	PER.	FROM.	TO.
APPLES,	barrel.	$1 50	$2 25
BACON, hams,	pound.	11	—
Shoulders,	"	—	10
Middlings,	"	—	10
BUTTER, printed, in lbs. & half lbs.	"	25	31
Roll,	"	12	20
CIDER,	barrel.	—	—
CALVES, three to six weeks old	each.	4 00	7 00
Cows, new milch,	"	22 00	30 00
Dry,	"	9 00	12 00
CORN MEAL, for family use,	100lbs.	1 62	—
CHOP RYE,	"	1 56	—
EGGS,	dozen.	13	—
FISH, Shad, trimmed		—	—
" salted,	barrel.	5 50	6 50
Herrings, salted, No. 1,	"	4 12	4 25
Mackerel, No. 1, 2 & 3,	"	4 50	7 12
Cod, salted,	cwt.	2 50	3 00
LAMBS, alive,	each.	1 25	2 00
Slaughtered,	quart'r	31	50
LARD,	pound.	8	—
ONIONS,	bushel.	75	1 00
POULTRY, Fowls,	dozen.	1 75	2 00
Chickens,	"	1 75	2 00
Ducks,	"	2 00	2 25
POTATOES, Irish,	bushel.	—	62
Sweet,	peck.	19	25
VEAL, fore quarters,	pound.	7	—
Hind do.	"	8	—

ADVERTISEMENTS.

A SAXONY RAM FOR SALE.

HE is of last winter's yeaning and represented as a very fine one. His sire cost $1,200, and this son is "worthy of him," and yet will be sold for $100, and perhaps a shade less. Enquire of I. I. HITCHCOCK,
Sep. 30 American Farmer Establishment.

350 DOZ. POTATO ONIONS.—This very excellent and remarkable production was introduced into England a few years since, from Egypt. It is not produced from seed, but by off-sets from the roots, like tulips and hyacinths, (is therefore a certain crop) and from its extraordinary fecundity, and other estimable qualities, has already (where it is known) become one of the most valuable garden products. Like the root, whose name it bears, this useful vegetable multiplies under ground, each bulb producing a cluster of onions, no wise inferior to the best of the species. The following is the mode of culture, and we would remark that fall planting is the true method—one reason why many have failed in an abundant crop, has been by planting in the spring instead of fall—they require only the slightest protection in winter. But to the directions as stated by an experienced cultivator.

"By the 1st of August, or as soon as the tops fall and wither, take them out of the ground, and lay them several days in the sun; then put them away in a dry place until October or November; they should then be re-set like tulips. The beds intended for them should be previously well wrought, and the plants set in rows about a foot apart. The small or young ones should be separated from the others, for these grow larger, but produce no offspring the first year. Before the approach of winter, some coarse litter may be spread over them, which should be removed in the spring—and they will vegetate early and produce a wonderful crop. They ripen in June, and are universally esteemed for their mild and agreeable flavor."

Thirty-two bushels of this fine Onion have been raised from a piece of ground 32 by 49. Price 37 1-2 per dozen, which is enough to commence with.

Just received from our Seed Garden, growth 1834, a few bushels *Feather Grass Seed.* Also, several sorts Bunch Beans, Early Corn, parsnip Seed, Carrots, Long Blood and Turnip Beet, Cucumber, Radish, Lewis Canteloupe, 50 lb. white Onion Seed, and in store, as usual, a general assortment of Garden Seeds.

By the first fall arrivals will be received an assortment of BULBOUS ROOTS, consisting of Hyacinth, Tulip, Dahlia, Narcissus, Ranunculus, Anemone, &c. For sale by R SINCLAIR, Jr
At Sinclair & Moore's Ag. Rep'y, on Light st.
Sep. 30 3 doors N. of Pratt street.

GAMA GRASS SEED

JUST received, and for sale at this Establishment—Price 50 cents per ounce.
Sep. 23.

100 Bushels of PEACH STONES WANTED, or any less quantity, for which a fair price will be paid at this Establishment. Sep 16.

PIGS OF THE BARNITZ BREED.

ABOUT the 25th inst. I shall be ready to deliver a few of these celebrated pigs at $5 each. Those whose orders are on register will have preference, but it is probable that after supplying them, a few will remain for sale. I. I. HITCHCOCK,
Sept. 16. American Farmer Establishment.

SOUTH AMERICAN JACK AND JENNY FOR SALE.

ONE pair of young and in fine condition, lately imported at New York from Colombia, S. A. Apply at 5 Spear's wharf.

TALLAVERA WHITE WHEAT.

500 BUSHELS of this seed, grown, and particularly prepared, by Col. Anthony Kimmel, Frederick County, Maryland, a sample of which may be seen at my store. For character refer to the American Farmer, (vol. 15, page 161.) Any quantity of which can be obtained about the first of September, by applying personally, or by letter, post paid, to
R. D. BURNS,
9 Bowly's wharf.
Price $1,80 per 60 pounds. Sep. 2.

AGRICULUTURAL IMPLEMENT MANUFACTORY.

THE SUBSCRIBER respectfully informs his friends and the public, that he has on hand, and intends to keep, a general assortment of his PATENT PLOUGHS; also, an assortment on the principle of his recently PATENTED PLOUGH, which are acknowledged by those who have used them to be the best and the cheapest ploughs now in use. He manufactures HARROWS, CULTIVATORS, CORN-SHELLERS, THRASHING MACHINES, and other articles in his line; which, he trusts he can furnish of as good quality, and at as reasonable prices as they can be furnished at any other establishment in Maryland. He will, from his own Foundry, supply manufacturers with all kinds of Castings of the best quality metal, for Thrashing Machines of various powers; together with other Castings for Agricultural Implements. He will purchase, or receive on account, any quantity of old iron.

CAUTION.

Iron Founders, Manufacturers and others, who deal in or use the article, are hereby notified that the subscriber has recently obtained LETTERS PATENT for an Improvement on the Plough, which improvement consists of a peculiar form of share, which embraces both a share and two points, and is susceptible of a reverse application, and self-sharpening by the reversion of such application. A definite description or knowledge of the improvement may be had on application to the subscriber, or any of his agents. Every infringement on his invention, either by manufacture or sale without authority, will be subject to the rigor of the law.

RICH'D. B. CHENOWETH.

P. S.—At his old stand, near Front and Ploughman-streets, near Baltimore-street Bridge, or at Jno Gildea's, old Cheapside. Sep. 2—4t

NEW LEICESTER BUCKS.

I AM authorised to sell several fine Bucks of the Leicester or improved Bakewell breed of Sheep, and one do of the Cotswold breed, at from $75 to $100 each. Who will have one or more? I. I. HITCHCOCK,
July 15. American Farmer Establishment.

THE FARMER & GARDENER;

AND LIVE-STOCK BREEDER & MANAGER.

CONDUCTED BY I. IRVINE HITCHCOCK, AND ISSUED EVERY TUESDAY FROM THE AMERICAN FARMER ESTABLISHMENT, AT $5 PER ANNUM, IN ADVANCE

No. 23. **BALTIMORE, OCTOBER 7, 1834.** **Vol. I**

☞THIS publication is the *successor* of the late
AMERICAN FARMER,
(which is discontinued,) and is published at the same office, at five dollars per year, payable in advance.
☞When this is done, 50 cents worth of any kind of seeds on hand will be delivered or sent to the order of the subscriber with his receipt.

American Farmer Establishment.

BALTIMORE: TUESDAY, OCTOBER 7, 1834.

A FAVOR ASKED.—Our files of the Farmer and Gardener are becoming exhausted for the very gratifying reason, that our subscription list has increased faster than we anticipated. Nos. 6 and 7, and indeed, all the Nos. from 5 to 14 are much wanted. Will postmasters who have any remaining in their offices, and subscribers or others who may have any of these Nos. to spare, send them to us by mail?—Such favors will be duly appreciated by their friend THE EDITOR.

AGRICULTURAL FAIR—It has been suggested within a few days past that it would be gratifying, and perhaps beneficial to the Agricultural community, to hold an exhibition and fair in or near Baltimore, in the fall of the year annually. There is no agricultural society in action in this part of the state, and no definite plan has been agreed upon for carrying the scheme into execution; but the suggestion, so far as relates to the present season, is, that on the day after the termination of the races, which will be Saturday the 25th of this month (October) there be a "gathering together" of such objects interesting to farmers and the friends of Agriculture as can be collected in and about Baltimore on this short notice, and if it shall be attended with beneficial results, that hereafter a more extended co-operation of the agriculturists of our state be procured. At all events, there will, on the day above indicated, be offered to the inspection of the public a variety of fine cattle and sheep, and perhaps some other live-stock, and probably some agricultural implements from the manufactories of our enterprizing fellow-citizens engaged in that branch of business. Some at least of the objects exhibited, if not all of them, will also be for sale at fair prices, and it will probably be an excellent opportunity for procuring valuable live-stock implements, and other things useful to good farmers. Probably the Three Tuns tavern, at the corner of Pratt and Paca streets, will be the place of exhibition. We shall by next week be able to speak more definitely on this subject than at present, for the plan is entirely new, and nothing more has yet been decided on, than that several of our highly respectable agriculturists will unite and do what they can towards a Fair on the day above mentioned.

THE RIGHT WAY IN MARYLAND.—An attentive and skilful farmer of this state in a recent letter to us says—"I am confident that in this region, give me a plough to turn under the weeds &c., and again keep turning under what may put up, and I can make much of our land rich in a very short time—I would like to have a little plaster to help the operation."

RAIL ROADS—SPEED.—We have long entertained the opinion, that as we become accustomed to locomotion by steam power, on rail roads, we shall gradually increase in speed till a velocity shall be attained and be established as *common* which we cannot now contemplate without apprehension. Who would have thought without a shudder a few years ago, of fifteen or twenty miles an hour as the common speed of steam boats? Yet this *is* now common, and it is an increase of four or five fold, of their original velocity. We have *commenced* rail road movement with about fifteen miles an hour. Now is it unreasonable to expect that this will be increased in as great a proportion as that of boats has been?—*We* prophecy that this calculation will be realized within five years, and that a mile a minute will become "not very fast," and any thing less than that "a snailish pace." We have been led into this reflection particularly to day, by a fact stated in relation to the opening a few days ago of part of the Boston and Providence rail road. The editor who pens the account observes, "We took our places in the cars at half past 4 o'clock, P. M. and proceeded at the rate of 45 miles an hour, and the entire distance at the rate of about 30 miles an hour. Mr. McNeil then performed the same distance in a single car at the rate of 45 miles an hour, and from the exactness and regularity of the movements of the engine, and the solidity of the road, it is believed that this velocity could be sustained without materially adding to the danger of the route." Thus will people become gradually reconciled to increase of speed, till the Kentuckian's extravagant story of passing mile stones so frequently as to make the road seem a grave yard, shall be almost a *grave* truth.

GAMA GRASS.—A correspondent asks us whether the young plants of gama grass of this year's growth will require protection next winter. We are not sure that they will, but we think it will be safest to cover them with litter the first winter, especially in his region—the banks of the Hudson. We shall so protect our own. We have received no reply yet to the crowfoot question propounded in page 57.

THE CORN CROP.—We are glad to learn from various parts of the country, that the injury done to this crop by the late drought which was so severe in this region, is not near so great as we anticipated. The drought seems not to have been *generally* severe, though in some portions of country it has caused much damage, especially to the corn and potatoes.

MARYLAND HORTICULTURAL SOCIETY,
October 4, 1834.

Mr. Edward Keen presented 6 very fine crook neck Squashes.

Mr. Lloyd presented one winter Cantaloupe, a very fine specimen.

Mr. Edward Cooms presented a fine specimen of the Bon Chretian pear.

Mrs. John Lester presented 6 very superior Pomegranates, some of them measuring 10 inches and a third in circumference.

Mr. Samuel Feast presented a collection of Tea Roses, a new Noisette, Tygrida pavonia, Hibiscus palmata and vulgaris, and 30 varieties of very fine Dahlias.

Mr. J. B. Bastian presented Argemone grandiflora, Gillia Capitata, &c.

Mrs. J. Buckler presented a handsome boquette of China Asters of the quill variety, uncommonly fine.

Mrs. W. H. Freeman presented ten varieties of Dahlias; Hoya Carmosa, passiflora hybrida; Heliatropium peruvianum, Plumbago Capensis, Lotus Jacobius, Salvia Splendens, &c.

Orators are most vehement when they have the weakest cause, as men get on horseback when they cannot walk.

THE FARMER.

[For the Farmer and Gardener]

Cornstalks and Chemistry.—On the first page of your twentieth number there is an interesting account given under the signature of "A Farmer," of cooking cornstalks by a spontaneous combustion. The facts communicated in that piece are pregnant with much instruction to the farmer and cattle breeder.

That is a case, in every sense of the word of spontaneous combustion; and had there been present some combustible substance, that had been more inflammable, the whole might have burst into flame on admitting the atmospheric air, and a destruction of property might have taken place.

There is little doubt with me, that such a combustion often takes place, when some poor fellow whom suspicion has marked for his victim, has to suffer the loss of character for the supposed act of communicating the fire to the building. This case should also be a caution to farmers, how they put away fodder too green, without proper ventilation or salting it. Another point of instruction may be gained by the consideration of this case. It demonstrates the fact that fodder may be much improved by the process, whether performed by nature or art, of cooking vegetables before feeding them to cattle. You have related in a former number, in giving an account of steaming food, the beneficial effects of that process. I believe the process alluded to in your twentieth number, of the cornstalks heating in the bin to be precisely the same in effect as that of steaming—boiling by immersion in water, has a somewhat different effect, and as far as my experience goes, it does not render the food so acceptable to cattle.

Your correspondent inquires, where all the water came from, which was found in the stalk on that occasion, and says, the stalks were wet quite through their substance, and very hot.—These are the facts of the case to be accounted for on scientific principles. I have no doubt but these appearances are familiar to every farmer, though they may not have attempted to inquire into their cause. It will be remembered of what vegetable substances are composed—corn stalks contain much sugar or saccarine matter similar to sugar cane. During the Revolutionary war, there was a factory in the state of New Jersey for manufacturing the corn stalks. The manufacturers did not attempt to granulate the sugar; but sold the proceeds in the form of treacle, which they obtained in such quantity and of such quality as to make it a profitable concern. You sir, have already made your readers acquainted with the fact, that sugar is composed in a large degree, nearly one half, of oxygen and hydrogen. You have likewise shown, that the same materials, when in a gaseous state, by a union of their parts, form water. This brings us to a solution of the inquiry, where did the water which was found in the dry stalks come from? The water was generated from the substance of the stalk itself.—The cornstalk like the oak and the beach, sugar, starch and other vegetable substances, is composed of carbon, oxygen and hydrogen—whenever a vegetable substance is deprived of the principle of life, whatever that principle may be, and is placed in a situation favourable to fermentation, that process very soon begins; in the West Indies, and in Liberia it begins in some cases in forty minutes after the extinction of the vital principle. In this process the component parts of the vegetable structure are set at liberty from their state of union, and at liberty to form other combinations. It is not the saccharine matter of the stalk only, that is thus operated upon, but even the cortical part is composed of the same primitive substances, and on decomposition, produce the same results. When the hydrogen and oxygen are set free, from their combination in the stalk, these gasses unite and form water. Thus the water was formed, in the case mentioned from the substance of the decayed stalks, and not absorbed from the atmosphere.

The bin mentioned by your correspondent was said to be six feet square and ten feet high, which I suppose would hold about 200 bushels of stalks. How much water would be necessary to wet that quantity of dry stalks thoroughly, so as to be ready to drop from them after thoroughly soaking the whole substance of 200 bushels? One hogshead of water would hardly have been sufficient. It may be seen by this instance, of what great value it is to the growing crop, to have present in the soil, some vegetable matter, that is undergoing decomposition and affording moisture to the earth, from the destruction of their own substance by fermentation. If this portion of stalks in the short space of four days, could produce one hogshead of water, by the union of its disunited gases; how much would the same stalks produce during a dry summer, while the whole substance was undergoing the same process?

The hydrogen and oxygen being separated from the stalk by fermentation, the carbon is deposited in a fine powder, and forms the black mould of the soil; this in its turn being acted upon by the oxygen of the atmosphere, and probably by the electric fluid, is converted into carbonic acid gas, which, being absorbed by water in the earth, is presented to the roots of plants in a digestable form; and again proceeds in its course of vegetation, and the soil is reduced to sterility unless fresh vegetable matter be applied.

I have heard of an instance of a lot of ground being appropriated to a perpetual crop of corn, and for many years, the land was improved and the crop increased. When the corn was husked, the buts of the stalks were used in this way; a plough was run between the rows of corn, and returned in the same track, turning the furrows each way; the stalks were then cut and laid in the furrow; when the plough was again used to turn the furrow on each side back on the stalks. It was said the ground improved yearly under this practice; and we may easily conceive that to be the case, when we reflect on the result from this bin full of stalks producing such a quantity of gas.

How important an object it is to farmers, to procure all the fermentable matter possible, to be turned under the soil, is strikingly presented in this case—when the woody fibre of the material used as a manure, is very dense and hard, the decomposition will be much aided by the addition of newly slacked lime.

I am, respectfully, yours, E. A.

Agricultural Chemistry—No. 8.

To the Editor of the Farmer and Gardner:—

Lime.—I have before stated, that the principal earths concerned in vegetation were silex or sand, clay and lime. I have shown that sand and clay, perform no other part in the process of vegetation, than that of forming a location for the plant and an apparatus in which the *cookery*, if I may be allowed the expression, of the vegetable pabulum, is digested and fitted for absorption by the roots of plants; and these earths likewise, form a bed in which the plant is held firmly by its roots in that position, which best promotes the regular functions of all its parts. The species of earth which remains to be mentioned, performs a more immediate agency in the process of vegetation than either of the other two.

Lime may be styled the flux of the crude materials which are to be reduced to a soluble state, before they can be appropriated to the nourishment of plants. This earth was supposed to be a simple uncompounded substance, until it was demonstrated by Sir H. Davy to be a compound, formed by the union of oxygen with a metallic base, to which he gave the name of *calcium*. There is only one known combination of calcium and oxygen, which forms the important substance called lime, or oxyde of calcium. The proportions in which these two substances unite, has never been accurately ascertained, owing to the volatile nature of its metallic base. The prime equivalent of the oxyd of calcium in the carbonate of lime, (called marble) has been determined with much precision, by an instrument invented by Dr. Ure, and is found to be in 100 parts, 43.60 carbonic acid + 56.4 lime.

Lime is usually obtained for chemical purposes, from marble of the whitest kind, or from calcareous spar, by long exposure to a strong red heat. It is a soft white substance of specific gravity 2.3. It requires an intense heat for its fusion, and has never yet been volatilized. It is soluble according to Davy in 450 parts of water, and 760 parts according to other chemists. If a little water be sprinkled on newly burnt lime, it is rapidly absorbed with the evolution of much heat and vapor. This constitutes the phenomenon called slacking. The heat proceeds from the consolidation of the liquid water into the lime, forming a *hydrate*, as slacked lime is now called. It is a compound of 3.56 parts of lime and 1.125 of water; or very nearly 3 to 1. If lime water be exposed to the air, it gradually absorbs carbonic acid from the atmosphere, and becomes an insoluble carbonate of lime, while the water remains pure. Lime water renders vegetable blues green; yellows, brown; and restores to reddened litmus its usual purple.

When lime is heated strongly in contact with chlorine, oxygen is expelled and chlorine is absorbed. For every two parts in volume of chlorine that disappear, one of oxygen is obtained; when liquid muriate of lime is evaporated to dryness, and ignited, it forms the same substance, or chloride of calcium. It consists of 2.56 calcium +4.45 chlorine = 7.01. Chlorine combines also with oxyd of calcium or lime, forming the very important substance used in bleaching, under the name of oxymuriate of lime; but which is more correctly called chloride of lime.

The genus called lime, embraces nine species; of these the carbonate, in some respects, forms the most interesting species in the mineral kingdom. It exists more abundantly than any other simple mineral, and by some is supposed to form one eighth part of the crust of the globe. In fact calcareous minerals of this species are every day produced, arising either from the disentegration of carbonate of lime, which had previously existed in the mineral kingdom, or proceeding from the decomposition of calcareous substances, once attached to animals.

It is an opinion maintained by some that all calcareous matter has been derived from animal origin; however that may be, it is certain that there is a rapid production of this substance in the tropical climate by shell-fish. I once witnessed an instance of this fact, being on the coast of Africa, in a vessel, the bottom of which was not coppered, it became very foul, and at Sierra Leone she was cast down and the bottom scraped; on arriving at Monrovia, after a passage of fifteen days, the vessel was again examined, and other barnacles were found attached to her bottom, with carbonacious shells, full six inches long, which had grown in that time. From whence was this carbonaceous matter derived? Was the metallic base or calcium secreted by the insect? If we can admit *that* to have been the fact, the oxygen and carbon may easily be accounted for. The human system has the faculty, in some states of fever, of forming carbonaceous concretions, especially in gouty affections. Whatever may have been the origin of calcareous matter, all, who have any experimental knowledge of its effects in agriculture, will appreciate its value very highly.

We have seen that the metallic base or calcium, united to oxygen, forms pure lime, and that lime attracts carbonic acid from the atmosphere and then exists unchanged in the form of carbonate of lime as we see it in quarries. We here see two of the ingredients of which all vegetable substances are composed; and when water is sprinkled on newly burnt lime, it absorbs nearly one part in three of water. We here find, that lime, in these different states, contains all that is necessary to constitute a vegetable substance, viz: oxygen, carbon and hydrogen. It has been formerly shown, that sugar contains oxygen 50.63, carbon 42.47, and hydrogen 6.90 in the 100 parts—also, 450 parts water will dissolve one part of lime; which being taken up by the roots of vegetables, and carried into circulation, there meeting with the hydrogen in the water, and exposed to light and the electric fluid, which appear necessary to the formation of vegetable matter, these materials may be so arranged, as to form sugar or woody fibre, according to the peculiar organic structure of the vegetable parts to which they are applied. In this way it may be seen that lime becomes really the food of plants.

But it is not in this way that lime imparts its greatest value in agriculture. It likewise acts as a solvent of vegetable and animal matters, that are put into the earth, by its chemical action on their substances. When vegetable substances are deposited in the earth, with quicklime, its first operation is to absorb all the moisture from the vegetable fibres; this deprives them of their oxygen and hydrogen; and the carbon is deposited in the earth, and forms the black mould, which being acted upon by oxygen gas and heat, when every 13 grains of carbon that is thus dissolved, forms 100 cubic inches of carbonic acid gas, which gas being absorbed by water is prepared to renew its round in a new vegetable form.

(To be continued.)

Ribbon Grass.—The ribbon grass of our gardens, (*Phalaris Americana*) is likely to become of great value in our husbandry: it has been found to be better adapted to wet, boggy grounds than any other species of grass; to propagate rapidly, either by seeds or by roots; to yield a very large product in hay or pasture, and to be well adapted to farm stock. The first suggestion of this fact came to us in a letter from Abednego Robinson, of Portsmouth, N. H., who says the discovery was accidental.

"A neighbor, he says, wishing to get rid of some of the roots which encumbered the garden, threw them into a bog, where they took root, and spread over a large space of ground, excluding every other plant. The water flows through the roots at all seasons. The turf has become so solid as to bear a cart and oxen. I walked through the grass when in bloom, and never beheld a more handsome and luxuriant growth. It stood perfectly erect, full of large leaves, even, and four or five feet high. It produces excellent food; cattle feed it close, and appear to be more fond of it when made into hay than any other grass. I have spoken for one half of the roots of the patch, and have ground ploughed in my meadow into which I intend to transplant them, at about the distance of corn hills."

On a recent visit from the Hon. E. Goodrich, of Hartford, we were happy to receive from that gentleman, a confirmation of the good opinion of the *phalaris*, which had been induced by Mr. Robinson's letter. It has been found as beneficial in Connecticut as in New Hampshire. Not recollecting the particulars narrated, we would beg of Mr. Goodrich, when he sees this, to forward them to us, in order that we may publish them correctly. The subject merits further attention; and if our anticipations are not irrationally founded, the *Phalaris Americana* will yet become the gama grass of the north. It is truly perennial, spreads rapidly, and may be inoculated in the manner suggested by Mr. Robinson, especially in a soil saturated with water, with great facility, and at a trifling expense.—*Cultivator.*

[Will Mr. Goodrich or the editor of the Cultivator, or any other gentleman who can, furnish us with a description of the seed of the *phalaris;* or, if possible, with a few of the seeds in a paper or letter by mail. The seeds of the gama grass are nearly as large as kernels of corn—unlike any other seed we ever saw.

Editor Farmer and Gardner..]

Crops in Europe.—The last advices from England state that the crops throughout the United Kingdom have generally been secured in excellent condition. The wheat crop is said to be a full average one, although the quality will not probably prove as good as that of the two preceeding years. In Ireland, and in the northern parts of Britain, some little damage was expected to reach the remaining outstanding grain, but it was not regarded as of any moment in the general estimate. The stock of old wheat on hand is declared to be larger than it has been at the same season for years back.

A London date of the 21st August mentions that the last German papers contain very unfavorable accounts of the harvest in the north of Europe. In Russia, Poland, Hungary, Prussia, Silesia, Bohemia, and even in Austria, according to those papers, such a continuation of drought as has prevailed since the commencement of the last spring is unprecedented, and the consequences are declared to be most ruinous to the hopes of the farmer.

Self sharpening Ploughs.—We saw at Rough Creek Church in the county of Charlotte a few days ago, several of these singular ploughs, so called because they are so constructed as to sharpen themselves in the operation of ploughing. The body of the plough is like the common dagon, and the point is a long and separate piece of iron, sharp at both ends like a mill peck, and running back towards the hinder part of the plough. When it gets dull by wear, it is turned over and the other side applied to the ground. After that end is sufficiently worn, it is unscrewed and the other turned before, which will last as long as the first. The wing of the plough is made in a triangular form, and each of its three sides can be alternately applied to the soil. It is said that one will last a year without going to the shop, and even then its repairs are very inconsiderable. It is said that they perform well, as far as they have been tried.—*Danville Reporter.*

Manure.—Arthur Young took five equal portions of a field, one portion of which he manured with dry cut straw; a second with a straw soaked five hours with fresh urine; a third with straw soaked in like manner fifteen hours, a fourth with straw soaked three days; and to the fifth portion he applied nothing. The whole was tilled alike and sowed with grain. The product in grain of the first was thirty-nine, of the second fifty, of the third sixty-three, of the fourth one hundred and twenty-six, and of the undunged portion nine. In weight of grain and straw, the product of the several portions, in the order above named, were found to be 100, 120, 300, and 48. This experiment affords a pretty conclusive demonstration of the value of vegetable matter as food for plants, and particularly of the fertility imparted by the urine of animals, which latter to us is generally lost to all useful purposes. It indicates the propriety of so constructing our cattle yards and stable floorings as to concentrate this liquid, and where there is no cistern to retain it, of applying straw and other litter to absorb it ere it is wasted. Another fact is worth noting—the rotting process took place wholly in the soil—the fertility was induced by long manure, and the liquids which it held—and not by muck.

Genesee Recorder.

THE BREEDER & MANAGER.

FARMING—SWINE, &c.

We have been recently favored with another letter from our friend Wm. K. Townsend, Esq. of Connecticut, from whom we last summer obtained our fine pigs of the Norfolk thin rind breed. We shall take the liberty to make some extracts, premising that the letter was written in answer to a request on our part for such observations as he might be disposed to make on the subject of farming generally, and of live stock particularly.

"DEAR SIR—Your favor of the 27th ult. was duly received; I am happy in giving you any information in my power in regard to live stock, or any thing relating to farming, which is a business that occupies all my time, and if it is not so much of a money making employment as some others, it is to me more interesting and pleasant than any other I could pursue; my health was never so good, and my anxieties and daily, unavoidable perplexities and troubles, never so few, as since I have followed an agricultural life. I too, am cultivating an old neglected farm, full of rocks, hedge-rows and briars, yet I find from an experience of five years, that I can by pursuing a thorough course of clearing, subduing and manuring the old neglected fields, obtain an abundance of all the various things we wish to cultivate, both for our own comforts, and to sell in the neighbouring market."

The farmer's life has generally been considered one of the most happy that man is permitted to enjoy, and we believe it is so; and why? To this important question we are inclined to respond, because he has most opportunity and most occasion to "hold converse" with those objects which serve to soothe and quiet the mind—the produce of his fields, and his garden—his domestic animals and his own family—these are the objects which mainly engage his attention and his affections, and they all give him pleasure. On the contrary, the man who mixes most with the world, especially he whose intercourse is chiefly with his own species, the public functionary, the politician or the courtier, will generally experience most perplexity, will find causes of continual excitement and be forced to witness constantly things and actions, of which he cannot but disapprove. Hence the relief which those experience who retire from the busy haunts of the city to the quiet scenes of rural life; but we are sermonising upon friend Townsend's text.

"I have been looking over my memorandum book to ascertain the age of the pigs sent you some weeks since. I find the pig from the premium sow was farrowed on the 29th April, I think the others came about three weeks earlier—say about the 10th April; you inquire whether I allow my sows and boars to run together, and to breed without restraint. They run together in the same pasture at certain seasons of the year, the boar confined at other seasons. I want my sows to pig in the spring—say last of March, or early in April—in fall, in September, or early in October. We cannot always have them come at these times, yet I try to manage so as to fetch them at, or as near to that time as possible; my old sows, as a general thing, do better than young ones; they are more likely to raise their pigs. I do not allow my very young pigs to run in the pasture with the sows; they are in the pen while the sows are allowed to range in the fields; the pigs are in this way soon learned to feed at the trough; the sows are kept in better condition than when the pigs are sucking them constantly. The sows are turned in to the pigs at certain times in the day and fed; after the pigs have sucked, they are turned out again; they remain with the pigs during the night, are fed early in the morning, and then turned out; they will in a short time drive in and out of the pen and pasture as handy as cows or any other stock.

I was surprised on the receipt of your Farmer, No. 9, to see my letter in regard to the pigs, inserted at full length—I am not in the way of writing to meet the public eye, yet if a plain statement of facts will be the means of inducing a single farmer to change a poor breed for one that will prove more profitable, I could not object to their being thus given to the public."

This is as it should be. Our correspondent is not in the practice of writing for the press, but his letters are instructive and clearly expressed, and what more can be wanted by his brother farmers? Reader, "go thou and do likewise."

AN INDIAN HORSE.—From the last number of the graphic "Indian Sketches," published in the N. York American, we extract the following:

"In the meantime, those of the Indians who had promised horses in the first day of our meeting now brought them up. A young indian first came forward, and led up a bright, jet black mare—after him followed another, holding in his hand a long buffalo tug, or halter, which restrained the wild motions of a two year old colt; his color was a snowy white, here and there broken with spots of brown. He had been wild in the prairies but a few weeks before. He was a slave, but had never been mounted; his back had never bent to a burden; they led him up in his own native wildness—his tail stood out—his ears were pricked up—his eyes starting—his nostrils expanded—and every hair of his long mane seemed almost erect with an undefinable feeling of terror. At one moment he dashed swiftly around at the full stretch of the long tug which secured him—then pausing and shaking his long mane over his head, he fixed the gaze of his almost bursting eyes upon his captor. Then raising his head, and casting a long, lingering, and almost despairing gaze upon the hills of the prairie, which till then had been his home, he made a desperate leap forward, dragging to the ground the Indian who held the end of his halter; but others rushed to his assistance and held him in. The crowd then attempted to close around him, but he reared upon his hind legs and kept them at bay with the rapid and powerful blows of his fore feet.

"At length a young Indian, who was standing near, threw off his robe: he crept cautiously forwards the animal from behind, and then with a sudden leap he bounded upon his back, and seized the tug which was secured in his mouth. Before this, the efforts of the animal had been violent; but when he felt the burden upon his back, when he felt the curbing hand of his rider, he sent up a shrill and almost frantic scream; his form bounded in the air like that of the active wild cat; he reared, he plunged but in vain—his rider was a master hand, and he retained his seat as unmoved as if he had constituted part of the animal itself; he curbed him in, he lashed him with his heavy whip until he crouched like a dog upon the prairies; his spirit was crushed; and the last spark of freedom was extinguished. Shortly after, one of the hunters came up and tied a pack upon his back; he made no resistance; and they led him off with the rest to finish his days in drudgery and toil.

LECTURES ON VETERINARY MEDICINE, *Delivered in the University of London, by Mr. Youatt.*—LECTURE V.—CONCLUDED.

The sense of smelling.—The sense of smell is mostly connected with our enjoyment, occasionally, however, it is a source, perhaps a useful one, of inconvenience and annoyance. In the quadruped it is connected with life itself; it is that by which the animal is guided in the choice of wholesome food, and by which also he is chiefly led to the perpetuation of his species.

The Olfactory Nerves.—The olfactory, or first pair of nerves, have a double origin, viz. from the corpus stratum, and the base of the corpus callosum. They seem to be prolongations of the medullary substance of the central portion of the brain. They are the largest of the cerebral nerves. Compare their development with that of the olfactory nerves of the human being. There is a remarkable difference, but not more so than in function; for in the one they are connected with pleasure, and in the other with life. Their course is short, exceedingly so; and they have not a single anastomosis, in order that the impression made on them may be conveyed undisturbed and perfect to the brain.

The olfactory nerve is a prolongation of the substance of the brain, and it abuts on the cribriform plate which I have described. I will not speak of the singular cavities which it contains, nor of their function; this belongs to the sensorial system, but it is in contact with the thin perforated plate of bone occupying the chasm between the base of the æthmoid bone and the frontals, and is in a manner pressed through this cullender-formed plate, and its pulpy matter is clearly to be traced over the upper part of the septum, and over a part of the superior turbinated bone. Although we soon lose it in the mucous membrane of the nose, we think we are warranted in concluding, that in a more filmy form it is spread over the whole of the cavity, and probably over all the sinuses of the face and head. It is, however, so mingled and incorporated with the mucous membrane, that no power of the lens has en-

abled us to follow it so far. It is like the *portio mollis* of the seventh pair, eluding the eye, but existing in sufficient substance for the performance of its important function.

An acute sense of smell is necessary to the quadruped. Every plant has its peculiar scent, and probably a scent of a marked character as connected with nutrition or destruction. We find out something of this by experience; the brute learns it from mingled experience and instinct. Without instruction and without experience the beast has generally some salutary warning to guide him to that which is nutritive, and to warn him from that which would be poisonous. He is, however, sometimes deceived; but that is only in the early part of the spring, when the scent of the infant plant is not developed. Horses at grass are frequently ill at that time, and cattle more seriously so, and, occasionally, they are actually poisoned. When the great Linnæus visited Tornea, the inhabitants complained of a distemper which killed many of their cattle, and especially when first turned out into the meadows in the spring. He soon traced the disorder to the water hemlock, which grew abundantly there, and which in the spring the cattle did not know how to avoid. Instinct is not an unerring guide; it is a powerful principle, and was wisely and kindly given where reason is limited; it does not, however, always guide the animal, when placed in an unnatural situation, or shield him from the consequences of our absurd management. When our calves and lambs are taken too soon from the dam, and turned with little or no experience into the pasture, they eat indiscriminately every herb that presents itself, and many of them are lost. Had they been suffered to browse a little while, or a little longer, with the mother, she would have taught them to distinguish the sweet and wholesome herbage from the deleterious and destructive. This is a point of agricultural economy not sufficiently attended to.

For the immediate and natural purposes of the animal, instinct is strong, but nature has made no provision for our folly. Galen once took a kid from the womb of its mother, and carried it into an adjoining room. He had previously prepared three dishes, containing various sweetened and tempting things, and one of corn and one of simple milk. The little animal, after having licked and cleansed itself for a while, got up and smelled at every dish, and began to lap the milk and drank it up. Here instinct was as strong as the purposes of the creature required. Milk was destined to be his first food, and instinct led him immediately to that. But nature designed that he should be gradually accustomed to his after-food by the side, and under the tuition, of his dam. But if the farmer, from ignorance or caprice, or because he thinks he can rear a few more calves, or bring his lambs or their mothers earlier to the market, separates the one from the other, and turns out his young stock to browse, inexperienced and untaught, why he must take the consequence of his folly and his avarice. This is a lesson in breeding or in grazing which we possibly may be enabled usefully to inculcate in our employers.

The Comparative Size of the Olfactory Nerve in different Animals.—Observe, in the specimens before you, the greater size of the olfactory nerve in the horse, the ox, the sheep, the swine, and the dog, and its peculiar form, as well as size, in the bird, compared with that nerve in the human brain. Again, compare the relative size of this nerve in the different animals, accordingly as they need, and possess, an acute smell. See the brain of the *horse*—our stabled servant—comparatively rarely sent to select his own nutriment amidst the herbage of the field, but having the greater part of his food provided for him. Next observe the brain of the *ox;* it is not more than half the size of that of the horse; he possesses not the intelligence of the horse; but not being so much domesticated, being oftener sent into the field to shift for himself—or if worked by day, usually turned out at night—the olfactory nerve is nearly as large as that of the horse, and comparing the bulk of the two brains, a great deal larger. The olfactory nerve of the *sheep* and the *swine* is comparatively as large as that of the ox, or more so, and for the reason already assigned; and, *lastly*, observe in the dog the still greater bulk of this important portion of the brain.

The Comparative Bulk of the æthmoid Bone.—I have said that we can plainly trace the nervous pulp over the æthmoid and upper turbinated bones; we suppose that it spreads over, but not in so great a quantity, the other contents of the nasal cavity. See then the increased bulk of the æthmoid bone of the *horse* compared with the human being; the æthmoid bone of the *ox* is considerably larger; that of the *sheep* larger still; and that of the *dog* occupying the whole of the upper part of the cavity, and thrusting the cornets from their situation, and rendering them comparatively diminutive and insignificant.

The Acuteness of Smell in different Animals.—Observe all our domesticated animals how carefully they examine their food and their water, and judge of their good or bad qualities by the smell. They submit every stranger to the scrutiny of this sense, and form their opinion of him, and even of his intentions, by the intelligence which they obtain through its medium.

In the Dog.—Passing by all the others, we trace in the dog the triumph of olfactory power. How indistinct must be that scent which is communicated to, and lingers on the ground, by the momentary contact of the foot of the hare, the fox or the deer! Yet the hound, of various breeds, recognises it for hours, and, some sportsmen have said, for more than a day; and he can not only distinguish the scent of one species of animal from another, but that of different animals of the same species. The fox-hound, well broken in, will rarely challenge at the scent of the hare, nor will he be imposed upon when the crafty animal that he pursues has himself taken refuge in his earth, and thrust out a new victim before the pack.

The blood-hound in former days, and even in modern times, cruelly and disgracefully trained to the scent of the human being, but now in his legitimate office the guardian of the deer or of the mansion, gives interesting proof of almost incredible acuteness of smell.

A miscreant had broken into a gentleman's stable, and mutilated some of his horses. When this was discovered on the following morning, a bloodhound was brought out. After a while he hit off the scent, and followed it more than fifteen miles. He then bayed at a cottage door, and the door being opened he rushed up stairs, and would have torn to pieces a man who was a-bed there, had he not been prevented. It was a discarded servant, who, instigated by a spirit of revenge, had committed the atrocity.

The most interesting case I know of this acuteness of scent had reference to a shepherd's dog, a *colley*. It is related by the Ettrick Shepherd, and he shall tell it in nearly his own words.

"A young man, his first offence, selected some sheep from the flock of a former master; and set off with them towards Edinburgh. But he had not gone quite off the farm before his conscience smote him, and he quitted the sheep and let them go again to the hill. He called off his dog, and, mounting his pony, rode away. After having proceeded about three miles, he thought he heard something coming up behind him, and in a few moments he saw his dog with the stolen sheep, driving them at a furious rate to keep up with his master. He was exceedingly troubled, for the sheep having come so far from home he dreaded there would be a pursuit; he beat the dog for the uncalled-for interference, and rode off a second time, taking the colley with him. He had not ridden above a mile before he perceived that his assistant had again given him the slip, and suspecting for what purpose, he was terribly alarmed as well as chagrined. He resolved to abandon the animal to himself, and took a road across the country which he was sure the other did not know and could not follow. He pursued a circuitous course through some lanes, and at length arrived at a gate which he opened and shut behind him; and, half a mile farther on, he called at a farm-house and breakfasted. As he was about to start again, a person told him that he need not hurry himself, for his dog had got the sheep safe enough down at the crooked gate. After this it was impossible for the poor fellow to get rid of them, and so he took possession of them, and drove them on, and sold them, and the transaction cost him his life. The dog, for the last four or five miles he had brought the sheep, could have no other guide to the road his master had gone but the smell of his pony's feet.

In the Swine.—The scent of the *pig* is acute enough. I have spoken of his discovering the earth-nut and the truffle many inches under ground. It is a well-authenticated fact, that a gamekeeper once broke in a sow to hunt patridges, and she was as sure a finder and as stanch a backer as any pointer that could be brought into the field.

In Birds.—Of the accuracy of the stories the wonderful scent of *birds* I have considerable doubt. That their sense of sight is exceedingly strong I can readily believe; for they have a peculiar mechanism by which they can, at will, convert the eye into a telescope of extraordinary power: and I imagine that it is by the sense of sight principally that they distinguish their prey. They are said to recognize the peculiar smell of approaching death. The crow and the raven will hover over the weakly lamb, and sometimes attack him before he is dead. Who has not observed with a thrill of horror, the vultures following the ill-fated Mazeppa, in that beautiful engraving depicting his cruel punishment? I do not imagine that the

scent is here concerned, but they see that their destined prey is weak and nearly exhausted, and are hovering round to pounce upon it as soon as, or before, life is extinct.

If the sense of smell be thus acute in all our patients, we account for it as a provision wisely and kindly made to guide them to their proper food or fit them for our service; but there is an important use that we may possibly derive from our knowledge of this extreme sensitiveness, namely, to guard a little the membrane of the nose from some of the injuries and dangers to which it is exposed. Persons bottling a considerable quantity of spirit have become partially intoxicated by the impression of the vapour of the liquid on the nerves of the Schneiderian membrane, whether the sensitive or the olfactory. One of my men used to be regularly purged when he pounded aloes.

The membrane of the Nose is a vulnerable part.—Contagion results from certain miasmata or poisonous particles diffused through the air. Their impression may be made on the Schneiderian membrane and not on the lungs, or, at least, principally on that membrane. I consider the membrane of the nose (and thus I shall have to describe the larynx to you) as a guard to the lungs. Of the more solid particles which enter the nostrils, few or none are permitted to reach the lungs, and not even the larynx. I might appeal to the habitual snuff-taker in proof of this. He may load his nostrils as he will, but not one atom of the deleterious powder reaches the lungs. So the deleterious gases are arrested, possibly absorbed, by the mucus membrane on which they impinge.

The Schneiderian membrane then is probably *a vulnerable part.* It may be the medium through which much evil is communicated, and contagion conveyed. The particles may not be sufficiently numerous or powerful to reach or dangerously affect the lungs, but they arrested by the mucus membrane of the nose, and absorbed by it, and the constitution becomes thus affected. A smaller quantity of poisonous exhalation or gas may here make its fatal impression. There appears the greater necessity for attention to ventilation, and especially for preserving this membrane from being habitually stimulated and debilitated by the effluvia of a close and heated stable, and thus, more than naturally, disposed to take on disease.

On the influence of what Nerve does the sense of smell depend?—M. Majendie has made some curious experiments on dogs, from which he has drawn the singular conclusion, that the sense of smell does not depend, as we have been accustomed to imagine, on the olfactory nerve, but on the fifth pair. As the experiments were made on one of our patients, and relate to the subject of our present lecture, it is necessary that I should notice them. He first divided the fifth pair of nerves, and from this moment no puncture, no corrosive substance, no penetrating odours, not even those of ammonia and acetic acid, produced the slightest visible impression on the membrane of the nose. In another dog he destroyed the two olfactory nerves, and he presented to the animal strong odours of which he evidently was conscious of the usual and full effect, and he conducted himself exactly as he would have done had he been in his ordinary state. M. Majendie then made some trials with weak odours such as those of aliments, but he could obtain no results sufficiently distinct to enable him to affirm that that kind of odour acted upon the nose of the animal: and, thence he concluded, that it may be possible that the olfactory nerve is not the nerve of smell, and that the olfactory sensibility is confounded with the general sensibility of the same nerve. I have here quoted the substance of what he states in his Physiology, and which is abridged from his Physical Journal.

Let us consider this a little. I will take the second experiment first. He divides the olfactory nerve, and he presents to the animal strong odours, and the dog is as sensible to their impression as he was before. The odours of which he made use, as it appears from his journal, were ammonia and acetic acid. Now, on what nerve do they make their chief impression? On that of common or peculiar sensibility? When I go into a close stable in the morning, and the conjunctiva is irritated, and my eyes weak, which are the affected nerves?—Decidedly those, and those only, of common sensibility. From what does the snuff-taker derive his chief pleasure, but from the titilation of the nerves of common sensation? And it is the impression which is made upon *them* that causes the violent sneezing of the unpractised snuff-taker. M. Majendie had divided the olfactory nerve, and the natural effect followed; the nerves of common sensibility were still affected by the pungency of the ammonia, as the conjunctiva would be; and he candidly adds, that he could not perceive that weak odours then acted upon the nose.

He also divides the fifth pair, and the animal no longer shrinks or sneezes when the ammonia is applied,—and for the plain reason that the nerve of common sensation is destroyed. But what does the dog do? He does that which M. Majendie confesses in his journal, but does not state in his physiology. When food was offered to him rolled up and concealed in paper, he unrolled the paper and got the food and ate it; that is, although he had lost the common sensibility of the part, he still was acted upon by the odour of the meat; or, in other words, the true olfactory nerve still remained entire. I confess that the experiments of M. Majendie are satisfactory to me, but I draw a conclusion from them precisely the reverse of that which he did.

Thus far, however, I am ready to go with him, that there is a mysterious connexion between the nerves of common and of specific sensibility; and that their agency must be combined in order to render the function of either complete: and that, for this reason, it probably is that they run to the same part, and ramify over the same tissue; I see in every portion of the frame, the nerves of organised animal life combining their influence in the discharge of the most important functions—they are in a manner necessary to each other; but I can separate them from each other in my mind, and I can give to each its peculiar agency. So here I see the nerves of common and peculiar sensation combining for the perfection of the sense of smell. I can believe that the influence of the fibrils of common sensation on the tissue, may dispose the nervous pulp of peculiar sensation more acutely to receive the impression, and to convey it to the common sensorium; but the very experiments of M. Majendie convince me that the olfactory nerve is the nerve of smell, and that the fifth pair is the common sensitive nerve of the face.

THE GARDENER.

Agricultural Botany.

Mr. Editor—If geology, as I showed in a late number of your paper, acquaints farmers with the ingredients and nature of soils, and the best method of improving them, botany informs them of the properties and comparative value of plants cultivated upon soils. And what plant is it not useful for farmers to understand? Is not a knowledge of the forty or fifty different kinds of oak found in American forests, of walnuts, the birches, the maples, and even of the whole of the one hundred and forty different kinds of forest trees, which adorn and enrich American hills and dales, useful to the practical farmer? Is it not important that he should know which to destroy as well as which to cultivate? Is there any fruit tree which it would not be interesting and useful for the farmer to know? And which of the grains, grasses or roots fit for cultivation may it not be of some use for the farmer to understand? Might he not even use a knowledge of the weeds and the noxious plants, which obstruct his labors, or defeat his efforts to some advantage? Of the fifty thousand different plants growing upon our globe, which may not in some way be useful to some farmer on some spot upon our earth?

Not merely the external properties of plants, such as their tenderness, weight, strength, durability, size, rapidity of growth, nutriment, flavor, ease of cultivating, profit arising from them, &c. &c., but the laws of vegetation to which they are subject, are useful, and ever important for farmers to know. It is undoubtedly known to most farmers, that a single grain of corn, of a red color, planted in the centre of a large field, will spatter many of the ears for a great distance around it, with red kernels or grains. But do they all know why a single grain of corn should exert such an influence upon the plants around it? If not, the knowledge of a single principle, which pervades almost the whole of the vegetable kingdom, would acquaint them, not only with this remarkable fact, but with a thousand others not less remarkable.

Among vegetables, no less than among animals, are males and females. In some instances the male and female, as in the apple, are in the same flower; the one called the stamen, the other the pistil. In other plants, as in Indian corn, the male and female are on different parts of the same plant, the one being in the top gallant, frequently so called, the other in the silk. On other vegetables as in the mulberry, the male and female are on different plants, as it is well known that some mulberry trees bear fruit while others bear none.

In the Indian corn, if the farina, or flower upon the stalk from the red kernel, be blown to the most distant part of the field, and strike upon a silk there, it will produce a red kernel. On the other hand, if a silk receive no farina from any source, it will be barren, and no grain be connected with it. Consequently if corn be topped before the farina is blown, or falls from the tops upon the silk, the crop will be entirely destroyed.

This law of vegetation which is so strikingly illustrated in corn, is equally true and important in many fruit and ornamental flowers, and pervades the whole vegetable kingdom. As this is but one among the numerous laws governing vegetable nature, the importance of an acquaintance with those laws, must be evident to every one.

Such being the fact, I am glad to learn, that collections are already made in several places, to be carried or sent to the *Education Conventions* appointed on the first Wednesday of November next. If this example should be generally followed in all the counties throughout the states, a *good beginning* would be made for diffusing a knowledge of practical, agricultural botany, both among farmers and all other classes of the community. AGRICOLA.

Mulberry Trees.

Brotherton, September 23, 1834.

Sir—I send enclosed a leaf taken from a mulberry, which tree is growing in my yard; I have about twenty of them growing in different situations about my premises, and from their great susceptibility of propagation, I have concluded to send you the leaf, to ascertain if it is the morus multicaulis, which I see recommended so highly in the Farmer and Gardener. If the result be as I anticipate, from the description of the tree I have so frequently seen, I shall forthwith make arrangements to propagate them the ensuing spring on a liberal scale, otherwise they will be cultivated only for shade trees in, and about the yard.

I feel convinced that many thousands of them could be raised in a short time, as they grow at an astonishing rate, and if turned to the account of the silk raising business, it will be a profitable business—let me know through the Farmer and Gardener. Yours, H. W. W.

[The leaf sent us, is of the tree usually called the Chinese paper mulberry (*Broussonetia papyrifera.*) It is not a *morus* or mulberry, and therefore its foliage is entirely unfit for food for the silk worm. It makes a beautiful and very dense shade, and is as our friend observes of very quick growth, and easily propagated. The *morus multicaulis* grows as fast as any tree we are acquainted with. We have hundreds of plants now in our garden from five to seven feet high, which grew from the root since March last. The trees we kept over winter to propagate from, we cut off even with the ground in March, and these shoots are from those roots to the number of from two to six from each root, thus proving its title to the appellation of *multicaulis* or many stalked. Some of the leaves on these young shoots are 13 or 14 inches long, and 10 or 11 wide. Our young trees will be fit to transplant in November.

Editor.]

From Niles' Weekly Register.

The Culture of silk—Silk has been advantageously cultivated in Connecticut for several years, and the *crop* is valuable. There is much room to extend this business. It is profitable, and excellently well fitted for the employment of the spare labor of women and children, not much interfering, or for short periods only, with their usual avocations. Two or three millions of dollars might be easily, and without any seeming effort, added to the annual creation of values in the United States, from this source—an amount exceeding the present product of the "national treasure" in the gold mines, *and worth more than all the gold obtained.*

We are glad to see that the culture of silk is extending, and observe that it has excited attention at Newark, N. J.—a happy location for the pursuit of this interesting branch of national industry.

It is not likely that we shall soon, if ever, rival France or Italy, in the production of silk piece goods. At present, perhaps, it is not desirable, even if we could do it. But in the supply of sewing silk, and the less delicate manufactures of this beautiful material, we might soon be rendered independent of all the world. The raw silk, as it is called, makes the most pleasant articles of hosiery that are in use, and the cheapest—for they are the most lasting.

The Baltimore "American," in a paragraph relating to the subject, says--

"In considering the present estimation of silk as a common article of clothing for all classes, it is a contrast to recall the extravagant estimates which were placed upon it as a costly luxury in the early stages of the manufacture. One cannot but smile, at reading that amid the enormous luxuries of the emperor Heliogabalus, it is charged against him as a special prodigality, that he wore a suit of clothes, entirely of silk, and that the emperor Aurelian refused the empress a dress of the same kind, because of its immense cost. The Lowell factory girls, who "strike" for wages, now clothe themselves with a material which was too costly for the empress of the world!"

To keep Plums and Peaches ripe through the year.—Beat well up together equal quantities of honey and spring water; pour the mixture into an earthen vessel; put in the fruit all freshly gathered and cover them up quite close. When any of the fruit is taken out, wash it in cold water, and it will be fit for immediate use.

MISCELLANEOUS.

Occupation.—The cure for maladies like yours, is employment. "Be not solitary; be not idle!" Rely upon it, life was not given to us to be spent in dreams and reverie, but for active, useful exertion, exertion that turns to some account to ourselves, or to others; not laborious idleness. (I say nothing of religion, which is between the heart and its Creator.) This preaching, I know, is foolish enough; but let it pass.—We have all two educations; one we have given us—the other we have ourselves; and, after a certain time of life, when the character has taken its ply, it is idle to attempt to change it.—*Randolph's Letters.*

A Great Queen, or King Bug-a-Bug.—Through the kindness of Dr. M'Murtrie we have had an opportunity of examining one of the most singular animals that ever issued from the plastic hand of Nature, a queen *Termes*, or *White Ant*, which, with other rarities, such as the skeleton of the great African Ourang, the *Chimpanse*, an entirely new *genus* of the Naiades (a description plate of which, we understand, will be found in the next number of the Journal of the Academy of Natural Sciences, now in press), a Snail with its egg, both of most gigantic dimensions, for a snail &c., have lately been sent to the gentleman from South Africa. According to the Doctor, although Termites are found in Europe, Africa, Asia, and America, it is only in the tropical portions of the old world that they are to be found in their "glory." There, their ravages are truly frightful. The communities they form are literally innumerable, and they consist of several sorts of individuals. The *laborers*, or the larvæ which are soft and white, do all the work and all the damage, and the *soldiers*, about half an inch long and of a brown color, do nothing but fight or attend to the defence of the colony, and mount guard over all the laborers. Having passed through the usual metamorphosis of an Ant, the Termites, male and female, take wing together, but soon come to the ground, where the females are seized by the laborers, forcibly conducted to their habitation, and there immured in a cell which is so built up as not to allow the possibility of egress. There the attendants of this now royal personage carefully supply all her wants, and gradually enlarge the dimensions of her (clay) cell, to accommodate it to the increasing size of her abdomen. *Three hundred thousand eggs* are deposited by each of these queens in a few days, being removed as they are produced by numerous attendants (the larvæ) to the adjoining nurseries or cells, where they are piled up and carefully attended to till hatched. The enormous development of the abdomen in this insect may be imagined from the following dimensions of the individual now in the possession of Dr. M'Murtries. Length of head and thorax, four eighths of an inch; breadth of ditto one eighth; abdomen, *four inches and a half long, one inch thick, and upwards of an inch broad.* The specimen by being preserved in diluted alcohol has retained all its freshness, and is perfect even to the antennæ. A memorandum accompanying this great Queen states that the Africans style her the "*King Bug-a-Bug.*" The dwellings of *these* Termites are of clay, somewhat conical, are elevated from ten to thirteen feet above ground, and at a little distance resemble a village of Hottentots.—*Nat. Gaz.*

Chemistry.—When butter is to be made; if a little old butter be put in the cream, the butter will come from much less churning.

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BALTIMORE PRODUCE MARKET.

☞ *These Prices are carefully corrected every* ONDAY.

	PER.	PROM	TO
BRANDY, Apple,	gallon.	$0 36	$—
Peach,	"	75	—
BEANS, white field,	bushel.	—	—
BEEF, on the hoof,	100lbs.	4 50	5 00
CORN, yellow,	bushel.	65	66
White,	"	65	66
COTTON, Virginia,	pound.	12	14
North Carolina,	"	11	14
Upland,	"	14	15½
FEATHERS,	pound.	35	38
FLAXSEED,	bushel.	1 25	—
FLOUR—Best white wheat family,	barrel.	6 50	7 00
Do. do. baker's	"	5 75	6 25
Do. do. Superfine,	"	5 00	5 25
Super Howard street,	"	5 12	5 25
" " wagon price,	"	5 00	5 18
City Mills, extra,	"	5 25	5 37
Do.	"	5 00	5 25
Susquehanna,	"	5 25	—
Rye,	"	—	—
GRASS SEEDS, red Clover,	bushel.	4 50	5 50
Timothy (herds of the north)	"	3 00	—
Orchard,	"	3 00	3 50
Tall meadow Oat,	"	2 25	2 50
Herds, or red top,	"	1 25	—
HAY, in bulk,	ton.	16 00	17 00
Pressed,	100 lbs	60	65
HEMP, country, dew rotted,	pound.	6	7
" water rotted,	"	7	8
LIME,	bushel.	31	33
MUSTARD SEED, Foreign,	"	4 50	5 00
Domestic,	"	5 00	6 00
OATS,	"	31	33
OIL, linseed,	gallon.	—	92
Castor	"	1 50	1 75
PEAS, red eye,	bushel.	— —	—
Black eye,	"	1 00	—
Lady,	"	—	—
PLASTER PARIS, in the stone,	ton.	2 81	2 87
Ground,	barrel.	1 37	—
PALMA CHRISTA BEAN,	bushel.	1 50	—
RAGS,	pound.	3	4
RYE,	bushel.	65	67
TOBACCO, crop, common,	100 lbs	3 75	5 00
" brown and red,	"	5 00	7 00
" fine red,	"	7 00	9 00
" wrappery, suitable for segars,	"	6 00	12 00
" yellow and red,	"	8 00	12 00
" yellow,	"	13 00	17 00
" fine yellow,	"	15 00	25 00
Seconds, as in quality,	"	3 50	5 00
" ground leaf,	"	5 00	9 00
Virginia,	"	4 00	—
Rappahannock,	"	—	— —
Kentucky,	"	4 00	9 00
WHEAT, white,	bushel.	1 05	1 12
Red,	"	90	1 00
WHISKEY, 1st pf. in bbls.	gallon.	32	33
" in hhds.	"	30	30½
" wagon price,	"	28	29
WAGON FREIGHTS, to Pittsburgh,	100 lbs	— —	1 75
To Wheeling,	"	2 00	—
		washed.	*unwash*
WOOL, Prime & Saxon Fleeces,	pound.	50 *to* 60	24 *to* 26
Full Merino,	"	44 50	22 24
Three fourths Merino,	"	37 44	22 24
One half do.	"	33 37	21 22
Common & one fourth Meri.	"	30 33	18 20
Pulled,	"	28 31	18 20

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NEWFOUNDLAND PUPPIES.

SEVERAL fine DOG PUPPIES of this variety, the produce of a very valuable pair, recently procured from Philadelphia—may be had at $10 each, on application to I. I. HITCHCOCK,
Sept. 16. Aman Farmer Establishment.

BALTIMORE PROVISION MARKET.

	PER.	FROM.	TO.
APPLES,	barrel.	$1 50	$2 50
BACON, hams,	pound.	11	—
Shoulders,	"	—	10
Middlings,	"	—	10
BUTTER, printed, in lbs. & half lbs.	"	25	31
Roll,	"	12	20
CIDER,	barrel.	—	—
CALVES, three to six weeks old	each.	4 00	7 00
COWS, new milch,	"	22 00	30 00
Dry,	"	9 00	12 00
CORN MEAL, for family use,	100lbs.	1 62	—
CHOP RYE,	"	1 56	—
EGGS,	dozen.	13	—
FISH, Shad, salted,	barrel.	5 50	6 50
Herrings, salted, No. 1,	"	4 75	—
Mackerel, No. 1, 2 & 3,	"	4 75	7 00
Cod, salted,	cwt.	2 50	3 00
LAMBS, alive,	each.	1 25	2 00
Slaughtered,	quart'r	31	50
LARD,	pound.	8	—
ONIONS,	bushel.	75	—
POULTRY, Fowls,	dozen.	1 75	2 00
Chickens,	"	1 75	2 00
Ducks,	"	2 00	2 25
POTATOES, Irish,	bushel.	50	62
Sweet,	peck.	19	25
VEAL, fore quarters,	pound.	7	—
Hind do.	"	8	—

ADVERTISEMENTS

A RARE CHANCE.

THE subscriber has the selling of the following Stock, at prices lower than of any similar stock he has ever known offered in this country. These animals will be for private sale, at the annexed prices, until Saturday, the 25th day of October, (the day after the termination of the Baltimore races), when all that may remain unsold will be offered at public auction. It is probable that many other animals will be added to the sale, of which due notice will be given. The subscriber has recently inspected every individual comprised in the following list, and therefore pledges himself that they will be found to answer the description here given. They are numbered, for convenient reference. Gentlemen wishing to improve their stock are not likely to have frequently such opportunities for doing it as the one now offered them.

Thorough-bred Durham Short-Horns.

No. 1—A Bull, about 18 months old, dun and white, of good size, and very handsome. This is a valuable animal. Price $200.

No. 2—A Heifer, about 18 months old, red and white, of good size, and very handsome. She is in calf to a thorough-bred bull. Price $150.

No. 3—A Heifer, of same age and description in *all* respects as No. 2, and same price. She is a great beauty.

Calves.

No. 4—A white Bull.
5—A dun and white do.
6—A red and white do.
7—A red and white Heifer.
8—A white Heifer.

These are all calves of 1834, of the same stock as the above described, and equally promising. Prices from $80 to $120 each.—Each of the above animals will be sold with a well authenticated pedigree of pure blood.

No 9—A Heifer Calf, red and white.
10 do. do. do.

These two calves are of the same stock as those previously described, and equally handsome, but the pedigrees of their dams being lost, they will be sold without pedigrees, though they are *known* to be thorough-bred. Price $50 each.

No. 11—A thorough-bred bull, about 15 months old, red and white, of good size and form—a very valuable animal. He was bred by a gentleman of Philadelphia, who has imported a few thorough-bred cattle for his own use, but as he does not deal in them, he keeps no written pedigrees of his stock. His certificate, however, which will accompany the bull, is a sufficient guarantee of the purity of his blood. The brother of this bull, 3 years old, was sold this summer by John Barney, Esq. for $300. This will be sold for $200.

Alloyed Durham Short-Horns.

The following, though not thorough-bred, are (several of them) very fine animals.

No. 12—A three-fourths blood Bull, nearly white, two years old in May last—very large—was got by Hector, a thorough-bred bull, raised by Mr. Powell, out of a fine half-blood cow. Price $100.

No. 13—A seven-eighths blood Bull, red and white, two years old in July last, of middling size, and very handsome—got by the celebrated thorough bred bull Bolivar, out of a three-fourths blood cow. Price $100.

No. 14—A three-fourths blood Bull, red and white, one year old—got by Bolivar, out of a half-blood cow. Price $75.

No. 15—A fifteen-sixteenths Bull Calf, five months old, white and red—got by Apollo, (thorough-bred) out of a seven-eighths blood cow. He is a calf of extraordinary beauty, and great promise. Price $75.

No. 16—A seven-eighths Cow, (the dam of No. 15), a fine breeder, for which alone she has been kept. She is 10 years old, in good health and condition, and is supposed to be in calf by No. 12 or 13. Price $50.

No. 17—A three-fourths blood Heifer, 3 years old, white—got by Bolivar, out of a half-blood cow. She is small, but very handsome. She has had one calf, and has proved herself a fair milker, and is in calf now to No. 12 or 13. Price $75.

Sheep.

No. 18—A Buck, of the New Leicester or Improved Bakewell breed, one year old—a good animal. Price $50.

No. 19—A Buck, of the pure Bakewell breed, two years old; a valuable breeder. Price $50.

No. 20—A Buck of last spring, of the Cotswold breed—very large and likely. Price $50.

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Who has for sale Devon Cattle of pure blood, at very low prices. Sept. 16.

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Oct. 7. American Farmer Establishment.

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Also one SLUT, one year old, from my grey hound slut, by a very fine imported Pointer. She appears to have the Pointer's nose and the shape and agility of the greyhound—color black. Also several NEWFOUNDLAND PUPS. Oct. 7.

MORUS MULTICAULIS.

THE subscriber has on hand a few hundred of this celebrated Tree, unrivalled in the quality of its leaves as food for the silk worm, for which he is ready to receive orders (accompanied by the cash) with *particular* directions for the delivery of the trees on or after the first of Nov. next. Price 50 cents each, $5 per dozen, or $40 per hundred.

The success and ease with which this tree is propagated, the extraordinary quickness of its growth, the superiority of its leaves over *all* others for the silk culture, and its uncommon luxuriance and beauty, altogether recommend it to the favorable notice of *every farmer* as a most valuable acquisition. I. I. HITCHCOCK,
aug. 26. Amer. Farm. Establishment.

SEED WHEAT, RYE, &c.

THE subscriber offers his services for the procurement of Seed Wheat, Rye, &c. for those who shall provide funds in Baltimore for that purpose. He does not keep those articles on hand, and therefore can send them to those only who furnish him with the *means in advance*. For all such, however, he will use his best judgment to procure such grain as shall be ordered, charging a small commission for his agency. I. I. HITCHCOCK,
Amer. Farm. Estab.

Note—I. I. H. has made arrangements for procuring for cash, Seed Grain of the very first quality, from some of the best farms in Maryland. aug. 12

GAMA GRASS SEED

JUST received, and for sale at this Establishment—Price 50 cents per ounce.

THE FARMER & GARDENER;

AND LIVE-STOCK BREEDER & MANAGER.

CONDUCTED BY I. IRVINE HITCHCOCK, AND ISSUED EVERY TUESDAY FROM THE AMERICAN FARMER ESTABLISHMENT, AT $5 PER ANNUM, IN ADVANCE

No. 24. **BALTIMORE, OCTOBER 14, 1834.** **Vol. I**

☞This publication is the *successor* of the late
AMERICAN FARMER,
(which is discontinued,) and is published at the same office, at five dollars per year, payable in advance.
☞When this is done, 50 cents worth of any kind of seeds on hand will be delivered or sent to the order of the subscriber with his receipt.

American Farmer Establishment.

BALTIMORE: TUESDAY, OCTOBER 14, 1834.

☞FLOWERS.—We invite attention to the fall exhibition of the Horticultural Society of Maryland which opens this day as announced below. A fine display of flowers especially of the splendid DAHLIA is anticipated. The society richly merits the attention and patronage of the public, and we cannot doubt that it will receive them. Whoever neglects to visit the rooms, we predict will regret it afterwards.

—

HORTICULTURAL SOCIETY OF MARYLAND—The Committee of Arrangement of the Horticultural Society, announce to the public that an exhibition of Flowers, &c. will take place at the Assembly Rooms, Holliday street, on Tuesday and Wednesday the 14th and 15th of October.

The Exhibition will consist of the Fall Garden flowers, amongst them the beautiful Dahlias, varieties of Roses, &c. with green house Plants, Fruits and Vegetables. Owing to the lateness of the season, and the risk of removing large plants, it is thought prudent not to give so extensive an exhibition as the one which occurred last spring.

Those who wish to contribute to the beauty and interest of the exhibition are informed, that whatever specimens of cultivation they may send, will be taken in charge by the Committee of Arrangement, who will attend at the room on the day previous. To prevent any mistakes, a full list of the articles sent by each individual is respectfully requested.

The Committee take this occasion to state, that so far the efforts of the society have been attended with the happiest effects—they have induced a praiseworthy and successful competition among the gardeners, which must result in a public benefit.

The Exhibition will open at 11 o'clock, A. M. and continue until 10 P. M. At 6 o'clock, the doors will be closed for a short time, to illuminate the rooms for the evening.

Admittance 12½ cents. Free admission to a member and one lady.

By order of the Committee of Arrangement,
T. EDMONDSON, Jr. Chairman.

—

There was a fall of snow last week in the western part of New-York, and in some places ice of considerable thickness.

—

KNOWLEDGE FOR FARMERS.—We commence to-day, the publication of a most excellent article on a proper course of instruction for farmers' sons. Although written in Europe, it is one of those embodyings of universal truth that are in place in *all* countries, and in season at all times. These observations will as naturally suggest themselves to every reader, as to the writer of this; but our object in taking up the pen at this moment, was to observe that in the absence of such schools as are here recommended, the best substitute that can be expected in our own country at present, is a dissemination of the knowledge here described, by means of the printing press, in the form of agricultural papers combined with a chemical laboratory, and museum of specimens in Botany, Entomology, Geology, &c. If a course of agricultural lectures could be added for the benefit of those young farmers who live adjacent, and those lectures and experiments be published in the paper for the benefit of more distant subscribers, the system would be almost complete. And why cannot such an enterprize be accomplished? Alas, the answer meets us at the threshhold—*for want of patronage*. The requisite talents cannot be commanded, nor the necessary investments made, without adequate funds, and these can scarcely be collected even to defray the expenses of this poor sheet, to say nothing of a suitable teacher, and the necessary apparatus for conducting a course of experiments and lectures. It would be the acme of our ambition to be the founder and conducter of such an establishment—we would rather be that, than any other description of useful citizen that we can think of. We *are* striving for just such an establishment, including also experimental ground, and collections of the best domestic animals, but really, we find it up-hill work, and are sometimes quite discouraged. Indeed, how can it be otherwise when we see a play actor making the tour of the United States, pocketing his fifty, seventy-five, or hundred thousand dollars in a year or two, as has been repeatedly done, and in some instances by persons of any thing but good character or talents—when we see a prophet or a miracle-maker, no matter how absurd his pretensions, command the purses of the thousand to his own advantage; and when we see a whole community freely disgorging the shiners to see not one but numerous idle fellows, make their ærial trips and tumbles at the iminent risk of their own *in*valuable necks—when we see these things and reflect how difficult it is to induce the same community to patronize establishments calculated in the highest degree to benefit the very primary interests of mankind, the cultivation of the earth, and of the human mind—we confess we feel somewhat discouraged. Sometimes we are inclined to ask for collections in the churches; for benefits at the theatres, and for fairs by the ladies; but then we verily believe we should be unsuccessful at all these points, and therefore conclude, since we are sure we are right, to "go ahead."

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AGRICULTURAL FAIR.—Since our last, we have conversed with several more of our neighboring farmers, all of whom promise to contribute whatever they can to the approaching fair. We know of some excellent machines that are to be exhibited *in operation*. We anticipate a decided popularity for these autumnal fairs, arising from their obvious utility. By the last New York Farmer we observe, that a similar exhibition and private and public sale of agricultural products is to be held near that city, on the 23d inst. Success say we to such enterprizes. We must not omit to mention particularly that some excellent cattle of the pure Improved Durham Short Horn and Devon breeds, and some fine Bakewell rams will be offered for sale at *our* fair, and that the strongest disposition exists on the part of owners to effect sales even at very reduced prices; let farmers who desire *improvement* look to it.

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WOOL—There is a brisk demand for this article at present in this market—see price current. We would advise our friends who have not yet sold, to avail themselves of this opportunity.

THE FARMER.

Agricultural Chemistry—No. 8.—(Concluded from page 179.)

To the Editor of the Farmer and Gardener:—

Newly burnt, or unslacked lime should not be applied as a manure to land, unless it abounds with a quantity of hard unfermentable vegetable matter; in such a case, Sir H. Davy says of lime when mixed with moist fibrous vegetable matter, there is a strong action between the two substances; and they form a kind of compost, of which a part is soluble in water. Thus lime renders matter which was comparatively inert, nutritive; and as charcoal and oxygen abound in vegetable matter, the lime is at the same time converted into carbonate of lime.

We here see the first operation of quicklime is to decompose vegetable matter; and consequently if applied to a growing crop, in land that does not abound with inert vegetable matter, the lime will prey upon the crop of vegetables, which, it is intended, it should nourish.

Sir H. Davy says, it converts moist vegetable matter into a compost; but he does not give us the *mode of operation* in which this effect is produced; we may come at an understanding of this operation, if we examine what are the constituents of the mass of lime, and vegetables on which it is intended to act—we have seen that the former is composed of a metallic base, called calcium, and oxygen, forming lime; and that this compound attracts, with considerable force, carbonic acid gas from the atmosphere, and from surrounding objects. We have seen likewise, in the vegetable matter exposed to its action, oxygen, hydrogen and carbon, in a state of union, forming the vegetable fibres. If any substance be presented to this compound, having a stronger attraction for any one ingredient of the composition, it must leave its union, and form a new composition; which is the case when lime is presented to moistened vegetable matter. By its attraction for carbon it dissolves the union of parts in the vegetable, and attracts the carbon, throwing out the oxygen and hydrogen—these two uniting form water, and we know that lime absorbs water with great avidity. In this process there is prepared a compost containing all the constituent principles of vegetables, in a soluble state; fit to be absorbed by the roots of plants. Fresh burnt lime, in its first effects, decomposes animal matter, and accelerates the capacity of such matter, to become the food of plants. But, in this process, the lime combines with carbon, and becomes *mild* lime, or carbonate of lime.

When animal or vegetable remains are destitute of fibrous matter, so as not to require a powerful solvent, or when their bulk is not in too great a proportion, or their tendency to putrescency excessive or noxious, the application of quicklime is an unnecessary reduction of their strength.

In turning under a crop of green clover, I presume the application of quicklime would not be serviceable; as the delicate texture of the clover stalk would not stand in need of being accelerated in its course of decomposition, but would give out its gas as fast as the roots of the growing vegetables could consume it; which should be the point aimed at. On the contrary, in ploughing down a large crop of old field sedge, it will be found but partially decomposed at the end of nine or twelve months after having been ploughed under; and in this instance a coat of quicklime would have accelerated the decomposition, and reduced its hard fibres to a state of solubility, in time for the crop to have been benefitted by its dissolution.

Mild lime moistened with sea water produces more alkali (soda) than when pure water is used; and is said in some cases to have produced more benefit as a manure. The metallic base of lime, or calcium, and oxygen have a tendency to unite in but one known proportion; that which forms lime; and when carbonic acid gas is united to this, in one certain proportion, (about 43 per cent.) the compound will remain exposed to the atmosphere without any tendency to decomposition, as we see in the quarry. Unburnt powder limestone has no solvent action upon animal or vegetable substance, and has no tendency to form soluble matter.

Many people labour under a gross mistake who suppose because they possess limestone land, they have no need of using lime as a manure; not understanding that unburnt limestone, even if powdered has no other action as a manure, than common sand. It may be rather more absorbient and more retentive of moisture than silex; but in decomposing vegetable manure it is powerless.

There is no description of lands more benefitted by the application of lime, as a manure, generally, than that from which the limestone is dug. There is frequently an uncombined acid in the earth, which is always unfriendly to vegetation; and, which is said to be indicated by the production of the common woodsorrel; this may be seen in limestone land perhaps, more frequently than in any other description of soil, and in that case, the application of mild lime is always a proper remedy.

The oxalic acid which exists in the earth in such places has been discovered by chemists to have a stronger affinity for lime than for any other of the bases, and is used as a test to discover lime when in combination with other substances. This acid unites to the lime, and forms an oxalate of lime; which is found to exist in the roots of many plants; as the onion, gentiana, rubia, rheum, scilla and many others. It is also found in the bark of the berberry, cinnamon, and many others, and in many of the acid fruits, as currants, cherries, &c. Although the oxalate of lime is said to be insoluble, yet by some means it finds its way into the substance of many plants and fruits. How does it get there? by absorption by the roots, or by composition from its elements, within the plant? I will leave this question for others to decide; but will unhesitatingly say, that if the excess of this acid be neutralized by lime, or potash, the farmer will find his land much improved: and find the natural grasses taking the place of sorrel.

E. A.

[For the Farmer and Gardener.]

Educated Farmers—A moment's reflection must convince any one, that a well educated farmer must be a man of almost universal science. The animal, vegetable and mineral kingdoms are constantly before him, and furnish the materials for which, with which and upon which he is daily employed. Unless he is acquainted with the laws of animal and vegetable life, he will be liable at all times to attempt a course counter to those laws, which must necessarily end in defeat.

The operations of the farmer are little else than one continued series of chemical experiments. In every step he takes in the preparation of his soil, or in forming manures, he must bring chemical science to his aid, or fail of success. In erecting fences, buildings, utensils, &c., the farmer must not only consult the laws of chemistry, but of Natural Philosophy, Botany and Mineralogy.

The atmosphere is the farmer's constant agent in preparing his soils, in making his hay, in preserving his roots and other vegetables, while, on the other hand, in many of his operations, his whole success depends upon his counteracting its influence. It must be evident, of course, that the nature, the properties and the uses of the atmosphere, ought to be as familiar to the farmer, as the common furniture upon his table.

Every farming utensil must be formed according to the principles of mechanical philosophy, or loss of strength be suffered in its use: and how common is it, for a plough, or hoe, or carriage, or some other implement of the farmer, to require twice as much strength in its use, or perform one half the work, that it would do under a little different form?

Nor is it sufficient for the farmer to be familiar with the principles of nature even if they embrace the circle of universal science. The *practice* is not less necessary—it is absolutely indispensable, and can be learned, only by a long course of discipline. As well might a man who knew only the theory of angles, or the principles on which the joints of cabinet work must come together, be expected to make a well finished secretary or bureau, or a person who only understood the theory of sounds, be expected to make a good musician, and a skilful player of the organ, piano, violin, flute and all other instruments, as a man who only understood the theory of agriculture, let it be ever so complete, be expected to make a good practical farmer. After all the knowledge it is possible to acquire of Botany, Entimology, Geology, Chemistry, Natural Philosophy, the laws of animal and vegetable life, and the principles of inanimate nature, unless a farmer can actually wield the axe, the hoe, the plough and other farming instruments, together with much practical knowledge with the daily arrangement and management of business, he must be subject to great losses, and nine times out of ten to entire failure.

Notwithstanding the knowledge and experience of a well educated farmer are so various and so extensive, they can all be acquired with the greatest ease, by every farmer in the United States.

The *winter evenings* of one season spent in such a lyceum as every farmer may have, are sufficient to make a good beginning in the cause of science, which a few seasons must crown with entire success.

Such being the fact, what better proposal can

be made to farmers, and to every farmer in every state in the Union, than to unite with a few of his neighbors in some plan for mutual improvement, during the evenings of winter and autumn now at hand? And where can arrangements for such an object be more successfully made, than at the *simultaneous conventions* proposed on the fifth of November next, in all the eleven hundred counties in the Union, for the promotion of schools and the diffusion of knowledge. In every case a FARMER'S LYCEUM, of the best character might be formed, not only for the benefit of themselves, but of the whole community.

AGRICOLA.

From the (Edinburg) Quarterly Journal of Agriculture.

On providing schools for the instruction of farmers' sons in the physical sciences.—By William Hawkins.

It is the object of this paper to recommend the establishment of schools throughout the kingdom, for teaching farmers' sons the elements of the sciences; such, for example, as Chemistry, Vegetable Physiology and Mechanics. And, in the progress of it, I shall endeavor to show, first, the usefulness of such knowledge, and then the method by which it may be generally diffused; and I think I can make out both of these points to the satisfaction of any body who will take the trouble of attending.

To prove the importance of agriculture to a community, seems very like demonstrating the advantage of having clothes to wear and food to eat. That it is indeed "the first and greatest concern of every nation, and the foundation of its prosperity in every other matter," is a truth so universally acknowledged, that it has almost obtained the currency of a proverb. But in spite of this general recognition of its supremacy, a due proportion of human ingenuity has never been directed towards the investigation of its principles. The mechanical arts have been carried to a high degree of perfection by the labor and genius of such men as Wall and Arkwright, and in every town we see rising round us institutions for the education of mechanics. But what of a similar nature, is being done for agriculture? We may look in vain for the institutions which should diffuse among practical farmers even that knowledge which already exists. The principles of agriculture may have been exploded by the genius of Davy, and its practice reformed by the labours of Young, but discoveries and experiments can be useful only as far as they are known. Mr. Tennant has shown how the farmers in the neighborhood of Doncaster might have told that there was magnesia amongst their limestone, and that consequently it would be injurious to the soil; that is to say, he knew these things himself, but of what use were his experiments to the Doncaster farmers, who never heard of them, nor perhaps of him either? It is said that vaccination was known in a district in Gloucestershire before the time of Jenner, but how did that avail those who were dying of the small pox in London? The barrenness of the hills in Westmoreland will be remedied, when, not the chemists and vegetable physiologists of London or Paris, but the tenants and occupiers of those very hills shall understand its causes and its cure. At present, the means of diffusing scientific knowledge amongst them is extremely limited, and the general establishment of agricultural schools would have for its object the conveyance of knowledge to where it is wanted, in a manner perfectly analogous to the ingenious contrivances by which water is conveyed from the reservoir at Islington, to the houses and inhabitants of London.

But, it may be asked, shall chemists and recluse philosophers presume to teach farmers how to farm? Is it not to be supposed, that men who have passed their whole lives in that pursuit, understand it better than any body else? Most unquestionably they do. Sir Humphrey Davy would, most likely, have made a bad farmer. There are a thousand important considerations connected with farming, of which he was probably ignorant; but still he ascertained, in a manner clearer than he had done before, the principles which regulate the application of quicklime as a manure. And it does so happen, that many of our useful discoveries have been owing to men not connected in practice to the art to which their discoveries were applicable. Arkwright was a barber, Dolland was a silk weaver. The compass, the chronometer, and the weather glass, three of the greatest helps to navigation, were all discovered by landsmen. Gunpowder is supposed to have been first discovered by a monk.

Put into another shape, the possibility of progressive improvement in agriculture may be a little more palatable. The farmers in France obtain from a soil at least as fertile as ours, no more than 18 bushels of wheat per acre on an average. Is this because they have less experience or less skill and knowledge than ourselves? And if one of us should undertake the thankless task of pointing out to them their errors, he might count at being laughed at for his pains,—for presuming to know better how to farm their lands than they who have been at it for generations.

Among the many helps towards a more perfect knowledge of external nature which the mind of man has discovered in these latter days, the first place, is due, by general consent, to

CHEMISTRY.

The efforts of the farmers are chiefly directed towards making the land more fertile; and the first step in this process is to inquire in what particulars less fertile land may differ from that which is more so; to compare the two together; to find out the ingredients of each, and the proportions in which they are mixed. The knowledge how to do this is Chemistry. Arguments upon particular cases are commonly more intelligible than abstract reasoning; and it may therefore be advisable to select an instance. The following is from Sir Humphrey Davy's Agricultural Chemistry.

He says, "A soil of good apparent texture from Lincolnshire was put into my hands by Sir Joseph Banks, as remarkable for sterility. On examining it, I found that it contained sulphate of iron, and I offered the obvious remedy of top-dressing with lime, which converts the sulphate into a manure."

Now, what is the process by which, as we may suppose, Sir Humphrey Davy arrived at the knowledge that the difference between this barren soil and other soils of the same appearance, consisted in its containing sulphate of iron. By previous instruction, he had made himself acquainted with soils in general, and with their most usual ingredients, and he proceeded to test for them, one after another, until he threw in the regent which forced the latent mischief to show itself.

For the sake of perspicuity, let us suppose, that of the many substances in nature, which may not improbably exist in a soil (and the presence of either of which would lessen its fertility) the four following are supposed to be the most probable:

1. An Alkali.
2. An Acid.
3. Magnesia.
4. Sulphate of Iron.

Any vegetable blue, such as the infusion of violets, would be a test for the first two substances. The infusion would turn green if an alkali, and red if an acid were present. The presence of magnesia would be indicated by its slightly effervescing when plunged into an acid, and by its rendering diluted nitric acid milky. If by these applications it should be decided that neither of the first three ingredients existed in the soil, the next point would be to inquire as to sulphate of iron. It might be difficult, it might perhaps be impossible, for the eye or the hand to perceive it; but, if it existed, a few drops of the infusion of galls, poured into a wine glass containing a small portion of the earth dissolved in water, would cause the mixture to turn as black as ink, and it would in fact be ink, for sulphate of iron and galls are the materials of which ink is commonly made. And all this is very easily done; it might be performed by a child. All that is required is, that a few ounces of the soil should be brought home, and, at each experiment, a teaspoonful of it put into a wine glass, and a table spoonful of the test liquid poured upon it.

By means as simple as these, a man may tell what ingredients go to the composition of any soil that he may wish to examine; but it requires a little more trouble to ascertain the proportions in which these ingredients exist; and the barrenness of a soil may be owing to the excess or deficiency of an ingredient, not less than to its absence or presence. A chemical analysis of soil, however easy to those who have been regularly taught to conduct it, would scarcely be performed by those who had not; and few men can be brought to give these things sufficient attention after their school days are over; for which reason it is sufficiently desirable to have them taught in youth,—

"In the morning of our days, when the senses are unworn and tender, and the gloss of novelty is fresh on all the objects which surround us."

"The instruments required for the analysis of soils are few, and but little expensive. They are a balance capable of containing about a quarter of a pound of common soil, and capable of turning, when loaded, with a grain; a set of weights from a quarter of a pound troy to a grain; a wire sieve, sufficiently coarse to admit a mustard seed through its apertures; an argand lamp and stand; some glass bottles; Hessian crucibles; porcelain or queen's ware evaporating basins; a wagewood pestle and mortar; some filters, made of half a sheet of blotting paper, folded so as to contain a pint of liquid, and greased at the edges; a bone

knife, and an apparatus for collecting and measuring æriform fluids."—*Agricultural Chemistry*, 146.

And a farmer need not possess all these things himself. If the proposed schools were established in every district, the apparatus, with the necessary regents would be kept at each school, and might be used occasionally by any body; and all he wants for most purposes would be a few acid and vegetable infusions,—a test box, in short,—with the weights, sieves, lamps and earthenware used for domestic purposes. And many very important results might be come at by these simple methods.

What can be easier to observe, whether an infusion of any kind turns vegetable blues red or not? But if it does, the infusion contains an acid, and therefore lime, or an alkaline substance, is a good dressing for it. When a piece of paper moistened with muriatic acid, and held over the steam arising from a dunghill, gives out dense fumes, it is a certain proof that the decomposition is going too far, for it indicates that volatile alkali is disengaged.

It requires very little labor to observe, whether a soil effervesces by the action of an acid, or whether it burns when heated, or what weight is lost by the heat; and yet these simple indications may convey most valuable information concerning the ingredients of the soil.

If the whole case rested upon these instances, there would be little room to fear refutation, for they surely prove the applicability of Chemistry to agriculture—they prove that many of the causes of sterility, and consequently the appropriate remedies, may be discovered by its aid.

Not that all these instances would be applicable to all soils, but some would apply to one soil and some to another, and happy would he be whose land was so good that he could find no fault in it. And it may be repeated over and over again, in favor of chemical analysis, that all barrenness, as well as every other quality of a soil, must of necessity be owing either to the presence or absence—the excess or deficiency—of some element.

(To be continued.)

From the Northampton (Mass.) Gazette.

Apples.—There has not been such a scarcity of apples in this part of the country since the year 1794. The cold weather in May destroyed almost all the fruit on the hills and in the valleys. Some persons have a few apples and will make a small quantity of cider, but the greater part have hardly enough for apple pies, and will be destitute of cider, apple sauce, and winter apples. So far as we have observed, there are more apples on the trees in the meadows and low lands near Connecticut river, than any where else. We have heard old people make the same remark in regard to apples in 1794.

It is said of Lord Bacon that when he rode in the country, he rode with his head uncovered, that he might, as he said, "feel the spirit of the Universe upon him."

THE BREEDER & MANAGER

[From the American Turf Register.]

On Bots in Horses.

Mr. Editor: *Balto., Sept.* 4, 1834.

It is almost an universal opinion that bots are more "destructive to horses than any disease to which they are subject." And you having lately put into my hands No. 1, vol. 5, of the Turf Register, I was much pleased with the able and scientific essay on bots over the signature of S. of Glencairn. As in it he has given a correct history of the bot and its parent, the fly, I should not have troubled myself with writing this scrawl nor you subscribers with reading it, but to assist him in correcting a general error in opinion, and preventing the tortures to which so noble and useful an animal as the horse is, by having administered to him such noxious remedies as are often worse than the supposed disease. By what I shall here say I may be condemned as a heretic against common opinion, and particularly so by many who may be esteemed as possessing an extensive knowledge of the horse; but this does not deter me from doing what I believe to be justice to the public. If a man suppresses what his experience has proved to be true, because that truth is not orthodox, he in order to gain favor acts the part of a hypocrite, and in so doing is an enemy to truth and to the public; for it is by a knowledge of facts and the spreading of those facts that truth can predominate. With an extensive experience of thirty-five years bearing me through with the fact, I fearlessly combat the opprobrious term heretic and throw it back on those who possess the common opinion against truth.—It is becoming to show respect to common opinion, but when it is in error and that leads to error in practice, it is equally becoming in us to endeavor to correct such opinion in order that truth may prevail.

As regards the connection between man and horse, there are few opinions having in their tendency so much evil as that of bots being destructive. Therefore, against this I shall contend by taking four positions. And 1st.

If bots were as destructive as it is said they are, we should not see a horse raised to an age capable of doing work, for while they are yet colts, and in the breeder's possession, they are particularly liable while running in the field to the influence of the fly and its deposits.

2nd. The fact is as stated by your correspondent, that bots live on the chyle only.

3rd. The remedies made use of under the supposition of the disease being bots, are usually of the most exciting quality, which are in many cases destructive to the horse.

4th. All the interval remedies made use of on such occasions, are given in drenches, whereby numbers of horses are innocently and unknowingly killed.

My 1st position is a fact so self-evident that when taken into consideration it requires no illustration.

In support of my 2nd position I will add, that it is not because they are attached to the stomach by their tentacula that they of necessity live on the solids; for those hooks by which they are attached have nothing to do with taking in nourishment, the only use of those hooks is to keep them supported in their natural situation until they shall have arrived at maturity, and then to be thrown off with the fæces; for had they not this hold their bulk would cause them to be passed off before they could be matured. Their letting go that hold is not voluntary; they are I may say of necessity compelled to remain in that state their allotted time, in order that the design of nature should be perfected. When this time arrives, which is partially in the month of May, but more numerously in June, July and August, and again partially in September, they are in those months past off to enter on their chrysalis stage preparatory to a reproduction of the fly. 3rd. The disease to which the horse is most subject are spasms and inflammation of the intestines, and as either of them at times cause raging symptoms, such as laying down and rolling, rising up and looking to his side, pawing the ground with his front feet, and kicking his belly with his hind legs, in some cases he raises up his head and turns up his upper lip; all these are taken for symptoms of bots: we notice some persons who will turn out the inside of the upper lip, and because they can see small lumps (which are glands,) they say he has as many bots, and in this they are positive. On the presentation of the above symptoms the common practice is to give medicines of the most exciting quality; and should the disease be inflammation, what from such treatment can be expected but the horse's death? If it be spasm with no disposition to terminate in inflammation, the result will be favorable. In a communication of mine on thumps, in your August number, my treatment of inflamed bowels and of spasms are stated; which, if followed will in general be found to give satisfaction. 4th. Although the giving of drenches is so common, it is nevertheless a fact that numbers of horses are killed by the practice; and this may happen by the hands of the most experienced person, with this difference, that the experienced man will know the instant when the evil is produced; but it is more than probable that the inexperienced person will not know. To give a drench it is necessary to raise the horse's head at least so high as that his mouth shall be more than on a level with his throat; which position for the act of swallowing is unnatural, and being so there will be more or less difficulty in swallowing, by which a portion of the drench may as it often does pass into the trachea, (wind-pipe,) and induces a disposition to strangulation and coughing, and thus inflammation of the lungs is often produced and often terminates in death. To the above cause in the difficulty of swallowing is often added that of striking and squeezing the throat, which is much more likely to irritate and cause strangulation, than it is to make the horse swallow: to prove the truth of this assertion, let a person throw his head back, and while in that position slightly strike his throat; such an experiment will teach him the impropriety of doing or suffering it to be done to the horse. Seeing, as I have, the evil there is in drenching I have not for fifteen years or more given a drench: but all the medicine which I administer internally I put up in balls or powders.

If a ball is to be given, I recommend those who are not in the practice of giving them, to hold up the horse's head as when a drench is given, and

putting the ball into his mouth, push it far back about his teeth with a stick; holding up his head until he chews and swallows it. In giving a ball this way there is no risk of strangling, as by chewing he at one time prepares only a small portion for swallowing. The correctness of this practice will be fully proved on trial.

I always have, as I conceive justly, rejected the idea of bots killing horses, and if I shall not weary you and your readers' patience by too long an essay, I will now more fully illustrate the erroneousness of so common an opinion by the following facts:

Every horse that dies at the Veterinary College in London, is there opened before the pupils; while I was a student there, I never saw one opened which died of the bots, although I saw in some great numbers of them. And again, for many years on my first entering into practice, I made it a point to open every horse that died under my notice; since that time I have opened many, and all I have dissected and seen dissected would amount to many hundreds, and I never yet saw one that was killed by bots; but I have, when opening one horse, that was, while sick, said by all who saw him, except myself, that his disease was bots, been pointed to one of the natural openings of the stomach, as a hole that was eaten by them. I now forget whether it was the cardiac or pyloric orifice. This fact I have related to show how imperfect men may be, and at the same time believe themselves to be fully competent on opening a horse to discover his malady. Another similar case of imperfect knowledge I will relate. A horse which was afflicted with inflammation of his bowels, I was requested to attend; on my first visit, the owner, as is customary, must know what was his complaint; I told him it was inflammation of the bowels; to that he would not assent, but persisted in his opinion of its being bots, the horse died and was opened by the owner, who had much confidence in his own knowledge. The next time I saw him, he was in a rage against me for what he thought was in me a lack of professional skill, saying, "I told you that his complaint was bots;" and how do you know it, was my reply; his answer was, "he died and I opened him, and saw that the bots had eaten one part of the inside skin of the stomach:" I told him that he saw one part of the stomach very white, and the other, a darker color; "yes;" now, sir, you have displayed to me your ignorance, I replied, for the stomach in its most healthy state presents that difference.

I have in some cases stood by to see how in opening a horse, the examination would be conducted, and in one case the persons held up the omentum (which is the fine net-like membrane, covering the stomach) saying, see what a riddle the bots have made of the maw, see how they have eaten it. In this case I was strenuous to ascertain whether they believed they were then showing the stomach, and after fixing their attention to it, and their persisting that it was, I then to their disappointment pointed them to that organ. In this case, on first opening the abdomen, food was laying outside of the bowels; it having escaped through a small rupture of the stomach. There were not in this horse more bots than about half a dozen. The owner was present, and as we were returning, he told me, that if I had not been there, he should ever have believed that his horse died of the bots, but he was fully satisfied it was not so. The disease was inflamed bowels with rupture of the stomach.

I will relate one more case to which I was called, but before I saw the horse, a man told the owner, that if he would do what he would prescribe, his ears should be the forfeit, if in fifteen minutes it did not cure the horse. To hear a man thus speak, what owner would resist? For before my arrival, the man, with one of the owner's men, were sent to get the potion; while I was examining the horse, the owner related to me what had passed; on my asking what the medicine was, he answered, whiskey and indigo. I saw the disease was of such an inflammatory character, that the horse could not recover, and reflecting on the man's positive assertion, prudence dictated that I should say nothing, until the medicine was given; when this was done, I told the owner I had not given my opinion, but now I would, which was, that his disease was inflammation of the bowels, and that the medicine then given was in such a case poison. This being my opinion, and for suffering the medicine to be given, the owner was disposed to blame me, but on the positive assertion of the man, and knowing that I could not have cured him, I persisted in the correctness of my conduct. He was dead next morning. Numbers saw this horse in his sickness, and all except myself said his disease was bots.

On opening the abdomen, food was found squandered on the outside of the bowels, which caused the spectators (of whom there were about a dozen) more fully to believe it was the bots. On my looking for the stomach, and finding it in detached pieces, what was before with them belief, was now with them become fact; but on looking for bots and finding none, after having cut open the intestines their whole length, they were fully convinced of their error. The intestines and parts of the stomach were highly inflamed.—To account for the stomach bursting into rags, I believe theory is put at defiance, yet such was the fact. In this case there was an unusual quantity of water in the belly, the cause of which was explained by the owner, but which cause he had no knowledge of while the horse was sick. This person's rule was for each cart while at work to have a bucket for watering the horses at any time of the day: the weather was very warm, and when this horse stopped work for the day, the driver gave him three half bushel buckets of water, in as quick succession as he could draw them from the pump, and as the horse could drink them. In about fifteen minutes after drinking, the horse was taken with pain, which produced the most raging symptoms, such as pawing the ground, kicking his belly, looking at his sides, laying down and rolling; these symptoms continued in the greatest violence, until death put an end to his suffering. All the spectators said, if I had not been at the opening of the horse they would always have believed that bots had killed him. In detailing facts like the above cases, showing the absurdity of the vulgar opinion, I could fill more than two of your periodical numbers.

I will here ask the question, how a person who is neither acquainted with anatomy or pathology, can tell on opening one, or even four or five horses, (which are as many as any such person will open in his lifetime,) what part is right, or what is wrong? And again, as regards the destructiveness of bots, are not the prejudices of the community strongly operated on by the notions of former ages? and from this cause the mind being operated on while the horse is sick, with the firm belief of his disease being bots, that they on opening a horse must almost of necessity be deprived of seeing or examining for any other disease than those insects; for almost as sure as they open a horse, they ascribe his death to them.

Having been taught the anatomy and pathology of the horse, and for thirty-five years had an extensive practice, and having opened hundreds of dead horses, would it not be something most singular, that I should never have met with one that was killed by bots, if horses were as often destroyed by them, as common opinion represents.

It is my decided opinion that they never destroy life.

The following will, to many practitioners of human medicine, appear incredible. But it appears to me that there is very little analogy between inflamed bowels of the human subject, and of the horse. In him inflammation comes to a termination in much shorter time than in man. Several cases have come within my notice where horses to all appearance were enjoying the most perfect health, when in an hour, and even in some few cases, in a quarter of an hour, was dead, with inflammation so diffused, as not a viscera, either thoracic or abdominal, had escaped the disease. Such rapid termination of inflammation, I believe, is never found to be the case in man.

Blaine, than whom there is no better veterinary authority, ascribes this quick progress of inflammation, to the great portion of muscular coat which there is to the arterial system of the horse.

I have often met with rupture of the stomach and of the colon, without being able to find one bot in the horse.

With considerations for better treatment to the horse, than unnecessary tortures,

I remain, yours,

JOHN HASLAM, Veterinary Surgeon.

Exposure of animals to disease and accident.—A fine horse, belonging to a gentleman in the first ward, died on Sunday, having been seized suddenly and violently, on the preceding night, with every symptom of Asiatic cholera. The animal died with all the cramps and spasms which so often mark that disease.

Birds have been supposed to be exempt from the effects of lightning, because feathers are held to be nonconductors. Hence a feather bed has been the resort of many a timid person during a thunder storm. It seems, however, that their plumage is no protection to the feathered tribe against electricity. The Palmyra Sentinel states that three crows and a goose were recently killed in the town of Walworth by a stroke of lightning, and we noticed some weeks ago, in an eastern paper, that a large number of *blackbirds* were found dead, and that their bodies showed manifest evidence that they had been killed by the same electric fluid that shattered the tree under which they had sought shelter.—*N. Y. Com. Adv.*

THE GARDENER.

[From the National Intelligencer.]

Mildew.—In looking over Loudon's Gardener's Magazine of 1833, I was pleased to find an abstract of a lecture on Mildew, delivered by Professor Lindley, before the London Horticultural Society, of which, as it may be interesting to some of your readers, I will endeavor to give the substance.

Mildew is often confounded with blight, honey dew, &c. but is a distinct substance, and peculiar to peculiar tribes of plants. It generally appears on the leaves or stems, in the form of *red*, *white*, *and black spots*, as a number of minute projections, or frosty incrustations, or a brownish powder, spreading more or less rapidly, till the plant is destroyed. Mildew is fungi of different kinds, and these are divided into three classes: 1st, those which grow or lie on the surface of leaves; 2d, those which are formed in the interior of the stem or leaf, and produce when ripe; and 3d, those which only attack the roots. All these seldom appear but in Autumn.

The first of these fungi injure the plant by preventing its respiration. One of the most common of the fungi, which attack the common cabbage, is the *Cylindrosporium concentricum*, and they have the appearance of small white patches or specks of frosty incrustation. The mildew which attacks rosebushes, and many other flowering shrubs, is a kind of Uredo, so called, from *Ura*, to burn or scorch; for it gives to the plant attacked the appearance of being scorched. The fungus called *Acrosporium*, *Monilioides*, resembles, when magnified, a string of beads, and consists of a number of globules which, when ripe, fall, take root, and form fresh strings, or necklaces. Sometimes tufts of these appear, fixed to stalks, and are then called *Aspergillus*, from their fancied resemblance to the brushes used for sprinkling holy water. The superficial mildew which infects the onion, and is fatal to that plant, is called *Botrytis*, or bunch of grapes. The bean and pea have a superficial mildew (*Uredo Fabæ*) which spreads along their leaves like white roots curiously interlaced.

The second class of fungi which spring from the interior of the leaves and stems, are the most fatal. They appear in a sort of bag or case, supposed to be formed of the cuticle of the affected leaf. These attack the oak, pine, and other forest trees; the genus is the *æcidium*. The *æcidium pine*, found on pine trees has, when magnified, the appearance of a number of nine-pins. When ripe it emits a bright orange coloured powder. A mildew of this kind attacks barley, and is very injurious. It is vulgarly called pepper brand. The *Uredo Segetum* or smut is destructive not only to barley, but to wheat and oats. It destroys the grain, which it converts into a kind of jelly, and attacks the leaves and stems. The *puccinia graminis* which attacks corn, is formed in the interior of the stock, and, when ripe, burst forth into clusters, like bunches of grapes, of a dark brown colour. The *ergot* on rye is a well known and destructive species of mildew. It grows out of a spike of grain, like a prolonged kernel; is long, horny, and cartilaginous. It originates in the centre of the stem. It affects maize, and various species of grass.

The principal fungi of the 3d class are two, which attack the roots of plants, and both resemble truffles. One of these (*Rhizoctonia Crocorum*) attacks crocuses. It is called by the French *Lamort du safran*, and soon destroys the whole crop. The other fungus (*Periola tomentosa*) is found on the potato, lucerne, &c. It turns the roots to a purplish hue. They are both propagated by spawn or fibres, which cling round the roots. All these fungi propagate rapidly, requiring only twenty-four hours to come to maturity. One mushroom will propagate 250,000,000. Plants, Dr. L. says, are generally most affected by superficial fungi after a long drought. *Red plants* are said to be more liable to mildew than any other. Mr. Bauer has found that steeping grains of corn in lime water, will cure, or at least, prevent the spread of the internal mildew. There appears, however, as yet, to be no cure for mildew in the roots, but by forming a deep trench round the infected plants, and cutting off all communication between them and the rest of the field. W.

[From the Intelligencer and Expositor.]

Improvement of soil.—If an enquiring mind will go into the woods, where the soil is what we term rich land, and view nature at work, in nature's own way, he will discover readily, that for a considerable depth, this rich soil is a composition of vegetable matter principally, more or less decomposed,—in common language well rotted. He will discover, that what he applies the name of soil to is composed, almost entirely, of the decayed leaves of the trees with weeds and grass, and rotten wood—perhaps the production of centuries. But on a nice examination of this rich soil, he will be compelled to conclude, from evidence before his senses, incontrovertible, that decayed leaves, form the principal part. If he wishes for conclusive corroborating testimony, he will heap up a mass of them in a pen, sprinkling the mass with lime, and he will find after the process of fermentation, and decomposition has done its office, that the product will, on application to poor soil, produce the finest vegetation, and prove to his senses that it contains the pabulum, or food of plants, in a high degree. By still going on with his experiment, he will find ultimately, that leaves when decomposed, with the aid of decomposing agents, produce an admirable assistant to vegetation, and by forming a mass of leaves, sprinkling the leaves as he forms the mass, with lime, and adding a small portion of rich moist earth amongst the vegetable matter, he will find, on applying it to the earth for the purpose of aiding vegetation, that he has got a pile of manure.

From this evidence before him he will readily conclude, if capable of the operation of common sense, that for the purpose of littering animals, and as an assistant, in forming a compost manure, leaves, especially if gathered while charged with their whole elementary principles, must be an admirable auxiliary, in the production of the dung-stead, and worthy of being most assiduously collected for that purpose.

Amongst weeds, or green vegetable substances, experiment has amply decided, that those which produced the most putrid, and nauseous effluvia, during fermentation, were found producing the most active effect, on the growing crop. This fact seems to settle, by positive proof, the correctness of the theory, of many plants feeding rapidly on gases, evolved during the process of fermentation, through the medium of their leaves. As it would be highly desirable, previous to laying down any plan for making manure, in the form of compost, to have some idea of the relative value of different ingredients, which present for that purpose, it may be proper to have some facts placed before us. Leaves piled up in a pen, with alternate thin strata of swamp mud, when partially decomposed are found a superior preparation for the Irish potatoe crop. Put around the roots of fruit trees, this compost has been found to produce a healthy and vigorous growth. Its operation has been much increased in its efficacy, by the addition of lime to the mass. The finest Irish potatoes that I have seen produced in a southern climate, were produced by the addition of this compost.

A pen was made with small rails, a stratum of leaves, trampled down to twelve inches in depth, a sprinkling of lime added, after sprinkling the leaves well with muddy water three or four inches of swamp mud was then added, and this course continued, until the pen was six feet in height. This compost was made up in the fall, on the first falling of the leaves, and applied to the potatoe crop in the spring. The effect on the following crop of corn, was all that could be desired. A second pile was constructed with a stratum of leaves, two feet thick, sprinkled well with lime, previously, with muddy water—two carts came up, the one loaded with swamp mud, and the other with dung—from opposite sides the throwing on commenced, at equal pace, so as to mingle the two last well: on the layer of mud, and manure, being completed, say about four inches thick, another layer of leaves was added—sprinkled with water from a pond, then lime, mud and manure, and continued, until the pile was about six feet in height—a little earth was thrown on the top—I am satisfied the same volume of dung, spread over the same surface, would not have exceeded in production, either in the potatoe or corn crop, that followed, and to which the composition was applied, on planting.—In both cases the manure was applied in the drill, but plentifully. The following crop on both grounds was cotton—it was superior—the seed was drilled in the old corn, and potatoe rows, opened with a Scooter plough. The following year, the seed that came from the cotton, the year previous, was applied to a second corn crop, which much surpassed the first, indeed was amongst the finest corn crops to be found—Wheat and Rye followed and were superior.

I give this detail to show that the efficacy of leaves, is decided, in their action on plants, as a manure, when decomposed, for in the crops above stated, they were the basis of the manure that was applied, it being perfectly impossible for all the dung, and lime, that was employed for the formation of the compost, to have produced half the effect, when spread over the soil, or used as the compost was applied. PLANTER.

MARYLAND HORTICULTURAL SOCIETY.

☞ In our last report it was stated, that Mrs. *J. Buckler* presented some fine varieties of China Asters. It should have been Mrs. Wm. J. Buckler.

It was *Peter Coombs* that presented the Pears and Squashes attributed to Edward Coombs and Edward Keen in our last report.

Mr. Lawrence Ahern presented two bunches of celery.

Mr. Hugh Birkhead presented a fine specimen of Heath Peach, measuring 12¼ inches in circumference, and weighing 17 ounces.

Mrs. Wm. H. Freeman presented two fine plants of the common and purple Tea Roses, and two varieties of Dahlias.

Mr. Gideon B. Smith presented fifteen varieties of Seedling Dahlias.

MISCELLANEOUS.

Teasels.—There has been a great rise in the price of the teasel or fuller's thistle, and some farmers in Hatfield and Williamsburg have lately received large sums of money for the produce of small quantities of land. Three or four years since, teasels were sold at seventy-five cents; now the manufacturers give from $2 37 to 2 50 per thousand. Two farmers in Williamsburg have recently sold teasels to the amount of 1,500 dollars. In Hatfield, a single acre has, in some instances, yielded 100,000 teasels, which have brought over 237 dollars. There are very few acres, however, that do this. Two years are necessary to bring a teasel crop to maturity; the plants require much care and labor, and are liable to be winter killed and to other injuries. After the price fell to sixty-seven or seventy-five cents, the cultivation was relinquished by many, and the present high prices are owing to a great diminution in the quantity raised.

The Hatfield farmers commonly have their dish right side up when it rains.

Coffee—Wine has been the theme of grateful song in every language that is soft enough to flow in numbers; and even that coarse compound, punch, whose cacophonous English name, as if peculiarly suitable to its nature, is naturalized in all modern languages, has been celebrated by bards whose verse gives immortality; we have seen on the cigar stanzas far too poetical and sincere to have been dictated by the mere spirit of puff; and yet, the most delightful of stimulants and corporeal consolations remain unsung. The ode is still unwritten that is to be repeated by grateful millions as descriptive of the virtues of Coffee. Wine confuses the reason and inflames the passions; how many curses have been uttered in the morning by parched tongues in ache-splitting heads on the punch that had been drunk at night; and that cigars do not end in smoke many of our fair readers know, who, long after their extinction, are assailed by their invisible effects; but coffee, as fragrant as it is delicious, stimulates the intellect without disturbing its powers, calms the feelings even while awakening them, leaves on the palate none but the most grateful flavor, and never brings to the mind either shame or repentance—the most healthful of perfumes, the most aromatic of beverages, of stimulants the most innocent, worthy to be served by female hands. Happy Arabia to have given it birth. Surely it was through mysterious anticipation of the benefaction she was to confer upon the world by coffee, that to her wasgiven ages ago among the nations the distinctive epithet of *happy*.

There is a curious tradition about the mode in which the qualities of this precious gift were first discovered. Seyadly, a Mahometan priest, whose name is to this day held in veneration in the East, finding himself often overcome by sleep in the midst of his prayers, ascribed his drowsiness to the lukewarmness of his devotion, and was troubled with pious scruples. The Prophet, according to the legend, touched by his affliction, threw into his way a shepherd, who related to him, that whenever his goats had fed on the berries of a certain shrub, they remained awake, jumping and capering about all night. Seyadly desired to be shown this singular plant: the shepherd pointed out to him a handsome little tree, with a grayish bark, foliage of a bright green, whose delicate branches bore, just between the leaves that grew paired on opposite sides, bunches of little flowers white as the jessamin, mingled with small fruit, some green, some more advanced, of a clear yellow, and others in maturity of the size, shape, and color of small cherries. It was the coffee tree. Seyadly resolved to try upon himself the strange effect of these berries. He took a strong infusion of them, and passed the whole night in a kind of delicious intoxication which took nothing from the freedom and clearness of his mind. He communicated his discovery to his dervises, and in a short time coffee was sought after by Mahometan devotees as a divine gift sent to true believers.

The use of it soon spread over Mahometan countries. European travellers in the East learnt its virtues, and about the middle of the seventeenth century it was introduced into the capitals of Europe. At the beginning of the eighteenth century, Van Horn, the first Dutch Governor of the East Indies, residing at Batavia, obtained several plants, and sent one to Amsterdam.—This bore seed the following year, which being planted, produced several shrubs, one of which, sent to Paris, was successfully reared in the Jandin des Plantes, and was the parent of all the Coffee trees in the French Colonies.

The East where it originated, produces the best: Mocha is still unequalled. The Mahometans are worthy to be thus favored, for they do justice to its native virtues in the artificial preparation of it, and drink it pure. To have the 'magic beverage' in perfection, three things are requisite: first, that the article bought be of fine quality; second, that it be roasted to a turn,—a part of the process which demands skill and attention.—and third, that it be *not* boiled. Both its flavor and strength are carried off by decoction. Boiling water poured at intervals upon it, finely ground and gently pressed upon a strainer, extracts its strength without dissipating its flavor.—*Balto. American.*

Sweet Creatures.—Willis, in his correspondence says, "The women in Constantinople, I am told, almost live on confectionary. They eat incredible quantities. The Sultan's eight hundred wives and women (!!!) employ five hundred cooks and consume two thousand five hundred pounds of sugar daily! It is probably the most expensive item of the seraglio kitchen."

White Rats.—Two of this variety of the rat species were caught a few days ago in Messrs. W. C. Barron & Co's Bakery, in removing a kneading trough, under which they had burrowed. They were exhibited by the men who captured them, in a large wire trap, and excited a great deal of curiosity; for among the hundreds who pressed to see them as they were carried through the street, there was probably not one who had seen the like before. They are very pretty pets; larger than the ordinary grey rat; have pink colored eyes, and long silky hair, like that of the Angola goat. They are apparently less timid than the grey rat. One of the latter was put into their cage, when both immediately set upon it and worried it to death.—*Norfolk Herald.*

Geological Surveys.—The Geological Society of Pennsylvania has employed Mr. S. Clenison to visit and report on the gold region recently discovered in York county, in that state. This gentleman has recently returned from Paris, where he has served a long and faithful apprenticeship in the school of mines. The Legislature of Tennessee has recently appointed Dr. G. Troost to make a similar survey of the state. Professor Ducatel is appointed by the Legislature of Maryland to make a geological and topographical survey of that state. Mr. G. W. Featherstonhaugh is engaged under the authority of the U. States in the geological and mineralogical investigation of the territory of Arkansas. His report is expected to be made to Congress in February next. These various and simultaneous appointments evince a determination to develop the mineral resources of the country in good earnest.—*N. Y. Enq.*

Locked Jaw cured by Exposure to extreme Cold.—Mr. Blanchard, veterinary surgeon of the third [British] dragoons, had a horse attacked with complete locked jaw. It was in the winter season, and the weather was extremely cold and stormy. At night he was turned into the barrack yard; and next morning, found perfectly free from the complaint.

According to a document drawn up with immense labor, by the French government, it appears, that in Russia, one child is educated out of every 367 inhabitants—in Portugal, 1 in 88—in Poland, 1 in 78—in France, 1 in 20—in Austria, 1 in 13—in England, 1 in 11—in Bavaria, 1 in 10—in Prussia, 1 in 6—and in the U. States, 1 in 4.

It is easy to defend the innocent; but who is eloquent enough to defend the guilty?

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BALTIMORE PRODUCE MARKET.

☞ *These Prices are carefully corrected every* MONDAY.

	PER.	PROM	TO
BRANDY, Apple,	gallon.	$0 36	$—
Peach,	"	75	—
BEANS, white field,	bushel.	—	—
BEEF, on the hoof,	100lbs.	4 00	5 00
CORN, yellow,	bushel.	69	—
White,	"	69	—
COTTON, Virginia,	pound.	12	14
North Carolina,	"	12	14
Upland,	"	14	15
FEATHERS,	pound.	35	38
FLAXSEED,	bushel.	1 37	1 50
FLOUR—Best white wheat family,	barrel.	6 50	7 00
Do. do. baker's	"	5 75	6 25
Do. do. Superfine,	"	5 00	5 25
Super Howard street,	"	5 12	5 25
" " wagon price,	"	5 00	5 18
City Mills, extra,	"	5 00	5 25
Do.	"	4 85	4 87
Susquehanna,	"	5 25	—
Rye,	"	—	—
GRASS SEEDS, red Clover,	bushel.	5 00	5 50
Timothy (herds of the north)	"	3 00	3 25
Orchard,	"	3 00	3 50
Tall meadow Oat,	"	2 25	2 50
Herds, or red top,	"	1 25	—
HAY, in bulk,	ton.	—	17 00
Pressed,	100 lbs	60	65
HEMP, country, dew rotted,	pound.	6	7
" water rotted,	"	7	8
LIME,	bushel.	30	33
MUSTARD SEED, Foreign,	"	4 50	5 00
Domestic,	"	5 00	6 00
OATS,	"	31	35
OIL, linseed,	gallon.	—	92
Castor	"	1 50	1 75
PEAS, red eye,	bushel.	—	—
Black eye,	"	1 00	—
Lady,	"	—	—
PLASTER PARIS, in the stone,	ton.	2 81	2 87
Ground,	barrel.	1 37	—
PALMA CHRISTA BEAN,	bushel.	1 50	—
RAGS,	pound.	3	4
RYE,	bushel.	65	67
TOBACCO, crop, common,	100 lbs	3 50	5 00
" brown and red,	"	5 00	7 00
" fine red,	"	7 00	9 00
" wrappery, suitable for segars,	"	6 00	12 00
" yellow and red,	"	8 00	12 00
" yellow,	"	13 00	17 00
" fine yellow,	"	15 00	25 00
Seconds, as in quality,	"	3 50	5 00
" ground leaf,	"	5 00	9 00
Virginia,	"	4 00	—
Rappahannock,	"	—	—
Kentucky,	"	4 00	9 00
WHEAT, white,	bushel.	1 05	1 12
Red,	"	90	1 00
WHISKEY, 1st pf. in bbls	gallon.	32	33
" in hhds	"	62	30½
" wagon price,	"	—	29
WAGON FREIGHTS, to Pittsburgh,	100 lbs	—	1 62
To Wheeling,	"	2 00	—
		washed.	*unwash*
WOOL, Prime & Saxon Fleeces,	pound.	50 *to* 60	24 *to* 26
Full Merino,	"	44 50	22 24
Three fourths Merino,	"	37 44	22 24
One half do	"	33 37	21 22
Common & one fourth Meri.	"	30 33	18 20
Pulled,	"	28 31	18 20

A JACK FOR SALE.

I HAVE the selling of a fine JACK, nine years old, whose mules are excellent. He was imported from Gibraltar four or five years ago, and is now offered for sale for want of use by his present owner.

He is upwards of 12½ hands high, stout and well made. Price $250. Enquire of I. I. HITCHCOCK.

GAMA GRASS SEED

JUST received, and for sale at this Establishment—Price 50 cents per ounce.

BALTIMORE PROVISION MARKET.

	PER.	FROM.	TO.
APPLES,	barrel.	$1 50	$2 50
BACON, hams,	pound.	11	—
Shoulders,	"	—	10
Middlings,	"	—	10
BUTTER, printed, in lbs. & half lbs.	"	25	37
Roll,	"	12	20
CIDER,	barrel.	—	—
CALVES, three to six weeks old	each.	4 00	7 00
COWS, new milch,	"	22 00	30 00
Dry,	"	9 00	12 00
CORN MEAL, for family use,	100lbs.	1 62	—
CHOP RYE,	"	1 62	—
EGGS,	dozen.	13	—
FISH, Shad, salted,	barrel.	5 50	6 50
Herrings, salted, No. 1,	"	4 75	—
Mackerel, No. 1, 2 & 3,	"	4 75	6 75
Cod, salted,	cwt.	2 62	3 00
LAMBS, alive,	each.	1 25	2 00
Slaughtered,	quart'r	31	50
LARD,	pound.	8	—
ONIONS,	bushel.	75	—
POULTRY, Fowls,	dozen.	1 75	2 00
Chickens,	"	1 75	2 00
Ducks,	"	2 00	2 25
POTATOES, Irish,	bushel.	40	56
Sweet,	peck.	19	25
VEAL, fore quarters,	pound.	7	—
Hind do.	"	8	—

ADVERTISEMENTS

AGENCY FOR TREES, &c.

THE subscriber respectfully offers his services to his customers and the public generally, as agent for the procurement of Fruit and other Trees. It may not be generally understood or duly considered, that few nurseries contain *all* kinds of trees in equal perfection. One, for instance, is celebrated for its fine apple trees, another for its peaches, and a third for its plums or pears, while scarce any of them can make up a collection of *all kinds* of trees of the best quality. In this respect the subscriber flatters himself that he possesses peculiar advantages. His own nursery is not extensive or forward enough to afford many trees for sale yet, and his acquaintance with nearly all the most eminent nurserymen in this country, and of the peculiar excellencies of their respective establishments enables him to select from them all, probably a better collection of fruit trees than any one of them can furnish. Trees ordered from any particular nursery, or to be selected by me, will be charged at nursery prices and 10 per cent commission added. Orders ought to be forwarded immediately, and all confided to the subscriber's agency shall receive his best attention.

I. I. HITCHCOCK,
Oct. 14. Amer. Farmer Establishment.

FINE GEESE.

FOR sale at this establishment, a GANDER and two GEESE of extraordinary size. They are believed to be a cross of the large Bremen goose upon the grey goose. Their color is grey and white. The person from whom they were procured, assured us that individuals of this breed, have been fattened to weigh as high as 25 pounds. Price $5 for the three. Sept. 16.

A SAXONY RAM FOR SALE.

HE is of last winter's yeaning and represented as a very fine one. His sire cost $1,200, and this son is "worthy of him," and yet will be sold for $100, and perhaps a shade less. Enquire of I. I. HITCHCOCK,
Sep. 30 American Farmer Establishment.

WANTED,

AT the American Farmer Establishment, ORCHARD GRASS SEED, for which the highest price will be paid; also, CLOVER SEED and TIMOTHY SEED will be either bought or sold on commission, by
Sept. 16. I. I. HITCHCOCK.

SEVERAL FINE JACKASSES,

FOR sale at prices from $100 to $1000.—GOOD JENNIES are wanted. Enquire of
I. I. HITCHCOCK,
Oct. 7. American Farmer Establishment.

PUPPIES.

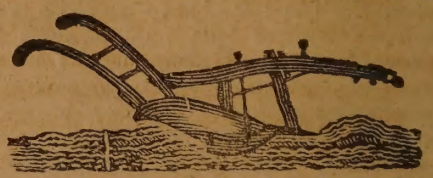
SEVERAL YOUNG POINTERS of the very best blood, will be old enough for sale, early in November. Also several young GREY HOUND sluts, from the pair sent from Europe to the president of the U. S., and by him presented to this establishment last fall.

Also one SLUT, one year old, from my grey hound slut, by a very fine imported Pointer. She appears to have the Pointer's nose and the shape and agility of the greyhound—color black. Oct. 7.

MORUS MULTICAULIS.

THE subscriber has on hand a few hundred of this celebrated Tree, unrivalled in the quality of its leaves as food for the silk worm, for which he is ready to receive orders (accompanied by the cash) with *particular* directions for the delivery of the trees on or after the first of Nov. next. Price 50 cents each, $5 per dozen, or $40 per hundred.

The success and ease with which this tree is propagated, the extraordinary quickness of its growth, the superiority of its leaves over *all* others for the silk culture, and its uncommon luxuriance and beauty, altogether recommend it to the favorable notice of *every farmer* as a most valuable acquisition. I. I. HITCHCOCK,
aug. 26. Amer. Farm. Establishment.



AGRICULUTURAL IMPLEMENT MANUFACTORY.

THE SUBSCRIBER respectfully informs his friends and the public, that he has on hand, and intends to keep, a general assortment of his PATENT PLOUGHS; also, an assortment on the principle of his recently PATENTED PLOUGH, which are acknowledged by those who have used them to be the best and the cheapest ploughs now in use. He manufactures HARROWS, CULTIVATORS, CORN-SHELLERS, THRASHING MACHINES, and other articles in his line; which, he trusts he can furnish of as good quality, and at as reasonable prices as they can be furnished at any other establishment in Maryland. He will, from his own Foundry, supply manufacturers with all kinds of Castings of the best quality metal, for Thrashing Machines of various powers; together with other Castings for Agricultural Implements. He will purchase, or receive on account, any quantity of old iron.

CAUTION.

Iron Founders, Manufacturers and others, who deal in or use the article, are hereby notified that the subscriber has recently obtained LETTERS PATENT for an Improvement on the Plough, which improvement consists of a peculiar form of share, which embraces both a share and two points, and is susceptible of a reverse application, and self-sharpening by the reversion of such application. A definite description or knowledge of the improvement may be had on application to the subscriber, or any of his agents. Every infringement on his invention, either by manufacture or sale without authority, will be subject to the rigor of the law.

RICH'D. B. CHENOWETH.

P. S.—At his old stand, near Front and Ploughman-streets, near Baltimore-street Bridge, or at Jno Gildea's, old Cheapside. Sep. 2—4t

THE COMPLETE FARMER.

JUST PUBLISHED and for sale at this establishment, price $1, "The Complete Farmer and Rural Economist, containing a Compendious epitome of the most important branches of Agriculture, and Rural Economy. By Thomas G. Fessenden, Editor of the New England Farmer." "Agriculture is the art of arts: without it man must be a savage, and the world a wilderness."
june 24

SEED RYE.

WINTER RYE of an excellent quality, suitable for seed, for sale at 80 cents per bushel, by
I. I. HITCHCOCK,
Sep. 2. American Farmer Establishment.

THE FARMER & GARDENER;

AND LIVE-STOCK BREEDER & MANAGER.

CONDUCTED BY I. IRVINE HITCHCOCK, AND ISSUED EVERY TUESDAY FROM THE AMERICAN FARMER ESTABLISHMENT, AT $5 PER ANNUM, IN ADVANCE

No. 25. **BALTIMORE, OCTOBER 21, 1834.** **Vol. I**

☞THIS publication is the *successor* of the late
AMERICAN FARMER,
(which is discontinued,) and is published at the same office, at five dollars per year, payable in advance.
☞When this is done, 50 cents worth of any kind of seeds on hand will be delivered or sent to the order of the subscriber with his receipt.

American Farmer Establishment.

BALTIMORE: TUESDAY, OCTOBER 21, 1834.

A FAVOR ASKED.—Our files of the Farmer and Gardener are becoming exhausted for the very gratifying reason, that our subscription list has increased faster than we anticipated. Nos. 6 and 7 and indeed, all the numbers from 5 to 14 are much wanted. Will postmasters, who have any remaining in their offices, and subscribers or others who may have any of these Nos. to spare, send them to us by mail?—Such favors will be duly appreciated by their friend

THE EDITOR.

We notice in the report of proceedings of a horticultural exhibition recently held in Massachusetts, that a *Mr. Perry* produced the best pears. Turn about is fair play, the boys remark—formerly, before temperance ruled the hour, "pears produced the best perry."—*U. S. Gaz.*

BLOOD HORSES.—Six blood horses, selected from one of the best stables in England, have arrived at Boston. They are to be sent to Virginia.

RYE GRASS.

To the Editor of the Farmer & Gardener—

Dear Sir—In your last No. I see an inquiry respecting Rye Grass—As I have made a trial of it, I will give you with pleasure what information I can respecting it—I have sown it on a tolerably rich, loamy soil with a clay foundation, and found it produce abundantly; for pasture it is very fine—my stock prefer it greatly to timothy and clover—I think it approaches nearer to the natural green grass than any artificial grass I have ever seen, but when allowed to stand for hay, it becomes rather coarse—I think timothy preferable for that purpose. I have always sown it in the spring with barley; I should be fearful of the winter destroying it if sown in the fall. If other grasses are sown with it, half a bushel of seed per acre is sufficient, but if put on alone, one bushel ought to be sown per acre. S.

Woodside, Oct. 8th, 1834.

New Lebanon, Camden County, N. C.
September 26th, 1834.

To the Editor of the Farmer and Gardener.

DEAR SIR.—In No. 18, September 2d, in the piece on cornstalk fodder, you say, the sap is taken up by the roots and carried through the stalk to the leaf, and after evaporation and the proper elaboration of the sap (or juice) of the plant, is returned from the leaves to the stalk, thence downwards till it arrives at the ear, and after proper oxydation, &c., forms the grain: also it is said that when the stalk is cut off, the sap which is taken up by the root will all be evaporated through the wound caused by cutting off the top.

Now sir, I presume, you and all your readers want conveyed, through your intelligent Farmer, useful and practical knowledge; and to come at that, please answer the following objections to your theory. Very often the stalks of corn are broken off at the first joint above the shoot, before the corn or even the cob is half made. If your theory is correct, there would be very little or no corn on such stalks—but practical farmers will tell you, that those stalks generally have the best ears on them. I have sometimes pulled out the tassel when I could but just see it, but never knew a stalk to be barren in consequence of it—and as to the sap's all escaping through the wound by cutting off the top, it does not seem to me quite agreeable to analogy; but I will state a few experiments which I made some years ago, and shall leave you to judge.

I cut the tops of a piece of corn above the first joint in the following manner. I began with the first row, left the next, cut the third and so on, cutting every other row through the piece. This was done when the corn was soft—say when it would answer to roast. In about two weeks I cut another piece in the same manner, and watched the result. At the time my corn of the first piece was fit to take the fodder from, as we term it here, (meaning the blades or leaves,) I found it was as green as any part of the field, and there was no perceptible difference between the rows where the tops were cut, and those that were left uncut; but not exactly so with the second piece. In this, the blades on the cut rows were somewhat dryer than those on the uncut. At gathering time, we could not perceive any difference in the corn; but I was not as particular as Mr. Clark. If I had been, perhaps I might have found much more difference than I observed. (I very much admire his mode of managing the experiment.) I continued the above experiments for three years, and found the result the same—since that time, I have only cut the tops to feed my horses with, in a green state, finding it so difficult to save the tops in our wet section of country.

Most respectfully, yours,

PHINEAS SANBORN.

We insert the preceding letter with pleasure, and would observe in reply, that we see nothing in it, which can, for a moment, weigh against the established theory of the physiology of plants, so beautifully illustrated in the scientific experiments of Mr. Clark. Mr. S. must conduct his experiments with *the same degree of precision* observed by Mr. Clark, before he can successfully controvert his conclusions. In regard to his taking the tassel or male organ from a plant of corn, which still produced seed, we think there is too much reason to suspect that this wanton little plant had not hung out her *silks* in vain, and that, to the great scandal of the crop, she *sported* with a neighbor. Such tricks are not unusual with either plants or animals—and, if we may credit the heathen mythology, even with the gods themselves.

PRICES CURRENT.—Advertisements having crowded upon us unusually, we are compelled to omit for this week our Prices Current—which we regret the less because there is no material alteration in them since our last.

At the grand fair and cattle show at Concord, among the premiums awarded was one of nine dollars to Reuben Hoar of Littleton, for the best specimen of domestic silk, one of twenty-five dollars to the same person for the mulberry trees; and one of five dollars to Elijah Whitten, of Groton, for a *soap stone pump.*

NURSERIES.—No class of men (except printers) deserve better encouragement than those who invest their capital and employ their time, in furnishing to agriculturalists every kind of fruit that the climate will ripen. Horticulture has been shamefully neglected until within a few years. A garden was hardly tolerated on a farm, and fruit, except the spontaneous crabs of a common orchard, were not to be tasted without great price. As the season for safe transplanting is approaching, or already come, we recommend our friends to follow the counsel of old Dumbiedikes—"Be aye sticking in a tree, Jock; they'll be aye growing while ye're sleeping."—*Boston Couier*

The wicked man lives to eat and drink, but the good eats and drinks to live.

THE FARMER.

Ribbon Grass.

To the Editor of the Farmer and Gardener.

Sir—I have seen, in two of your back numbers, mention made of the *Phalaris Americana*, or Ribbon Grass of our gardens. I am glad to see that grass brought into notice—I have long thought it would become an article of considerable interest to the farmer and gardener, if it was cultivated as a common grass. My attention was first directed to it by an accident, which by the by, is the way in which most discoveries in agriculture are effected—and as it has no claims to the merit of "book farming," it may possibly attract some attention from your casual readers.

The circumstance was this: I was at one of my neighbours, who kept a very handsome garden that was well set off with flowers. Among many other things, there was a fine bed of Ribbon grass, in one corner of the garden, nearly as high as the paling which surrounded it.

It so happened that I hitched my horse to the corner of the fence directly in contact with the *Phalaris*. I had not been long seated before there was a great hue and cry raised, and I was informed my horse had broken his bridle and had torn down the garden fence. It appeared he had most lavishly helped himself to the ribbon grass. My particular friend, the lady of the house, looked rather cross-eyed at the horse, on perceiving the destruction he had made in her parterre; the gentleman seemed much more impressed with the importance of the discovery, that the grass was so well relished by the animal,—a circumstance he had never suspected,—than he was by the defacing of a very pretty spot. I was likewise gratified with an agricultural discovery, and the horse seemed really to be more gratified than either of us: so the lady seeing three to one against her, we came off without much of a lecture for that time. This grass had but few seed-stalks, which were about four feet high, and the leaves, if straightened out, would have been nearly or quite as high. I have no doubt, but an acre sowed as that bed was, would yield six tons of good hay, and if we can judge from this instance it will be much relished by animals of all kinds.

I am disposed to think this grass is not very particular in regard to soil; it seems by what has been said, in your former paper, that a wet soil suits it very well; but in the instance of which I have spoken, it was growing in a light sandy soil; and from all I have seen of it, as far as my recollection serves me, it has flourished best in that kind of soil. It is in this respect quite a rival of the Gama grass. I can hardly imagine a more beautiful appearance than a field would present, if well set with this grass. A cow could not avoid giving good butter, if kept on such beautiful pasture.

I am, Sir, a lover of Good Butter.

Chemistry—When butter is to be made; if a little old butter be put into the cream, the butter will come from much less churning. When soap is to be made, if a little old soap be put into the ley and grease, the soap will be made by considerable less boiling.

From the (Edinburg) Quarterly Journal of Agriculture.

On providing schools for the instruction of farmers' sons in the physical sciences.—By William Hawkins.—(Continued from page 187.)

Entomology—the knowledge of insects.

The first step in proof of the utility of this science, might be to show that insects do a great deal of harm; but I shall probably be allowed to take that for granted. The destruction of the turnip crop alone is a very serious national evil. Slugs, grubs, and wireworms eat the seed in the ground, and other creeping things in the granary. Flies torment the domestic animals while alive, and blow their flesh when dead. Caterpillars eat cabbage, and moths holes in cloth. Almost every plant has its insect enemy. Cloverseed is destroyed by a small weevil (*Apion flavifemoratum;*) Dutch clover by the *Apion flavipes;* peas in the pod by the small beetle (*Bruchus Granarius.*) The wireworm is the grub of the beetle (*Elater Segetis.*) The turnip fly is properly a beetle,—a little jumping beetle (*Haltica nemorum.*)

The problem of course is how to destroy this legion of enemies. Now, to do this, with the greatest effect, we must watch them through all their changes. There may probably be many persons ignorant that most insects pass through four stages of existence, (of which the silk worm affords a familiar instance;) 1st, The egg; 2ndly, The caterpillar; 3dly, The chrysalis; and, 4thly, The butterfly or imago. It is in the second stage that insects generally do the most mischief. In the egg and chrysalis they do none; and in the imago, some do and some do not. Though we are all familiar with the insect in the shape in which its ravages compel our attention, we are frequently unconscious of its identity under other shapes. Though our last year's crop was destroyed by the wireworm, we should probably pass by a swarm of the parent beetle, the Elater Segetis, without being aware of the relationship; and in the same manner we look on the cockchafer, without suspecting that its issue is the grub which eats the roots of the grass. But however desirable a knowledge of entomology may be, no single individual could acquire it all for himself. He would need the eyes of Argus,—the patience of Job—and the years of Methusalem. The diligence and sagacity of men who have passed their lives in this study have at length accumulated a body of facts of the highest value; being printed, they have become the property of every body who will take the trouble to read them; and thus a school boy may learn in a few months facts which the labors of his whole life might have been vainly exerted in seeking.

Messrs. Kirby and Spence are the great authorities upon this subject, and from their book, most of the facts here stated have been taken. They themselves suggest a similar application to practice of the truths of their favorite science. "With respect to noxious caterpillars in general," say they, "farmers and gardeners are not usually aware that the best mode of preventing their attacks is to destroy the female fly before she has laid her eggs; to do which, the moth proceeding from each must be first ascertained; but if their research were carried still farther, so as to enable them to distinguish the pupa, and discover its haunts, (and it would not be difficult to detect that of the greatest pest of our gardens, the cabbage butterfly,) the work might be still more effectually accomplished."

The follies committed for want of a little knowledge of entomology, are well illustrated by another passage of the same authors. "In Germany, the gardeners and country people, with great industry, gather whole baskets full of the destructive cabbage-moth (*Noctua Brassicæ,*) and then bury them—which is just as if they should endeavor to kill a crab by covering it with water—for many of them being full grown and ready to pass into their next state, which they do under ground, instead of destroying them by this manœuvre, their appearing again the following year in great numbers is actually facilitated. Yet this plan, applied to our common cabbage caterpillar, which does not go under ground, would succeed."

The process of destroying noxious insects by attacking them in their early stages is not new in this country. P. Musgrave collected the chrysaldis in the spring, so as to become acquainted with them, and then employed people to catch and kill the moths and butterflies. If you catch 200 in a day you destroy 10,000 eggs, which would give 120,000 in a fortnight. Might not boys and girls be well employed in doing this? They have all the organ of destructiveness.

In short, it is abundantly evident, that if we knew them in all their changes, and know where they are concealed in autumn, winter and spring, we might exterminate these multitudes which are now as sands upon the sea shore. And if not all the knowledge required be yet in our possession, a great deal is, and might be easily imparted to the young farmer, if we could catch *him* in his chrysalis state; and what little is still wanting would soon be accumulated when we had set so many keen and interested eyes to observe; a fly could scarcely move but they would be watching him.

The disease of cattle.

This is an important subject. There is no individual of many years' experience in farming, who has not suffered severe losses from the death of horses, cows, or sheep. Diseases among sheep are perhaps the most common and the most extensive, and to whom is the cure of them entrusted? Generally to a laboring man, who has not the remotest knowledge of the several organs which compose the animal frame, or of their functions, and whose education has not fitted him to reason correctly even upon the few facts which he knows. What should we think of entrusting our friends or relations in sickness to a man who had studied no more of anatomy or medicine than a shepherd? And the mischief is not confined to their ignorance of the true remedy. Ignorant men are the most irreclaimable theorists. They attribute disorders to the most fanciful cause, and then from their assumed or absurd premises, they argue away to a conclusion as hardily as a geometrician. I have heard many striking instances of this from a friend of mine, who is himself both a physician and a philosopher. One poor patient laid the blame of his sufferings upon a cause which few would have thought of. "Sir," said he, "*it is the wind meeting the digester;*" and no doubt his remedy would have been to have put some covering round the digester, to keep the wind away. Another poor fellow was troubled

with a rising of the lights, and being asked whether he had taken any thing for it, "Yes," he said, "*he had swallowed some shot to keep them down.*" And I beg to assure the incredulous, that this is an extremely common disease and remedy in this neighborhood; and these are the very men who prescribe for our sheep! Formerly it was the custom to ascribe diseases to the direct operation of the devil, and of course the cure was correlavent to the assigned cause. "Touching the heart and the liver, if a devil or an evil spirit trouble any, we must make a smoke thereof before the man or the woman, and the party shall be no more vexed, and the devil shall smell it and flee away, and never come again any more." And the story goes on to say, that in Tobit's case the evil spirit fled, when he had smelt it, into the utmost parts of Egypt; but I do not suppose that this kind of fumigation would do now-a-days. But, *revenons a nos moutons*, or rather let us proceed to the horses, with which, indeed, the case is not much better. If you send for a farrier, the message not unfrequently is, that he cannot come to see the horse to-night, but that he has sent him a drink, and will come and see him in the morning. Now, try this system by the same test; how would you like it yourself? You are suddenly attacked with a violent complaint, and you send for Sir H. Halford. He never saw you perhaps in his life, and knows nothing whatever about what is the matter with you; but he sends his compliments, and desires you to take a dose of Daffy's Elixer; and if your complaint be what is very common with horses, viz. inflammation of the viscera, this dose will probably finish you, as out of all doubt it has finished many an unfortunate quadruped. Not that the absence of the farrier signifies much; he probably does not know a bit the less of the disease on that account. The study of horse-medicine and surgery, has no doubt made much greater progress than that of cows or sheep, and some of its professors are men of sense and education, as I am personally able to testify; but how few are they compared with those of an opposite character. It was said with much point and truth, by an old physician, that in all cases of illness there were three things to consider,—the patient, the disease, and the doctor; and that if any two of them pulled well together, they would be able to beat the third. In the case I have been supposing, it is the disease and the doctor against the patient.

Cows, again, stuff themselves with cabbage, or other succulent food, which by and by ferments and gives out a great deal of carbonic acid gas; the stomach becomes distended, and if relief be not speedily afforded, the animal dies.

Many a valuable creature has perished in this way, whose life might have been saved if the owner had been chemist enough to know what would stop the fermentation, or had been provided with mechanical instruments for drawing off the gas. And these attacks are sudden,—remedies to be useful must be near. There is no time to fetch the doctor, even supposing him to be worth fetching. The owner himself must know what to do, and how to do it. It is not proposed to make every farmer an accomplished surgeon; that would be impossible; but it is not impossible, and it would not be useless, to teach him at school something of the structure and diseases of the animals on whose health his fortune depends; something of the symptoms by which those diseases are indicated, and something of the operation of the most important medicines. Being so constantly slaughtered for domestic purposes, there would never be wanting opportunities for studying their organization. The national gain, by diffusions of this sort of knowledge, would be immense. According to Mr. Colquhoun's estimate, there were in the United Kingdom, so long ago as 1812,

1,800,000 horses.
10,000,000 horned cattle.
42,000,000 sheep and lambs.

There are no tables published of sickness and mortality among quadrupeds; but out of 53,000,000, the deaths occasioned by disease in the course of a year must amount to an enormous total. In Holland, above 500,000 cattle are known to have died of disease within twenty years. At 10*l.* a piece, this would come to 250,000*l.* a year. The tenth part of one year's loss upon this article of cows alone, would be enough to put into operation throughout the whole kingdom schools, which would create ten times as much wealth annually as was lost by the death of cows. If money laid out in diffusing knowledge produced a return of only one hundred-fold, it would be certainly an eligible investment; but a hundred-fold would be little, compared with its eventual products.

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MECHANICS.—THE ART OF PRODUCING A GIVEN RESULT WITH THE SMALLEST EXPENSE OF POWER.

It is very important to make power go as far as possible, because it is the dead weight upon a farm. Horses eat and drink, but produce neither milk nor wool. Perhaps the best way to show the value of this kind of knowledge, is to point out the losses attendant on its absence. Every body must have seen ploughs so ill constructed as to require three horses to draw them through a soil which might have been worked well enough with two, in a plough of the improved pattern. Instead of a sharp edge contrived to cut the ground, and a well formed mould-board to turn it over, you may sometimes see a blunt wedge dragged slowly through the soil, to the intolerable fatigue of the cattle, as well as the rapid destruction of the plough and harness; but little work is done, and that little in an expensive and slovenly manner.* Carts and wagons, too, are susceptible of great improvement; their more common faults are their weight,—the friction at the axle, the dishing of the wheels, and the want of springs: the consequence is that a horse is jaded and knocked up by what would, under more skilful management, have been an easy day's journey. An acquaintance with mechanics would also induce a man to pay more attention to the state of the roads. But besides carts and ploughs, we are every day introducing fresh machinery. We thrash, dress, plant, and sow by its aid, and though of no very intricate construction, these machines are somewhat more so than the old farming implements. The farmer is not to expect his laborers to study their principles, and he is not up to his work unless he can tell whether his tools are well or ill made, and cure the cause of any defect in their workings. If, by a little here and there, a man can save the labor of one horse on a farm, it is a great thing. The multitudes of machines which are rising like meteors around us, should, in this branch of science, at all events, unteach us the foolish vanity of supposing our present practices the best possible. In the West Indies they are no doubt as well convinced of the excellence of their agriculture as we are, and they have not generally introduced either the plough or the wheel-barrow! My authority for this is the writer of a lively sketch of their manners and customs, entitled "Marly, or a Planter's Life in the West Indies." He says, "After a week or five days of this kind of labor, very distressing to the people, few acres indeed were gone over, although there were rather more than one hundred negroes employed, one day with another, digging these holes in the ground. *Had the ground been previously tilled with the plough*, an amazingly greater quantity of these holes could have been made in one day than it was possible for the people to effect in three or four, in the manner in which they worked.—To carry the manure to the required spot was the task of the negroes, and the weak negroes, who with some little help at the manure-heaps, had to fill their baskets and then carry them on their heads at a pretty smart pace, and empty them into the holes. This employment of bearing the manure none of the carriers at all relished, but the stimulus of the whip, and the daily encouragement of a dram of rum effected wonders. *Had the people been furnished with wheel-barrows*, they could have performed their task with ease."

It need not be inferred from this, that I suppose our practice to be as faulty as theirs. It is adduced for no other purpose than to rouse people from the lethargic dream, in which we are all too apt to indulge, that the established practice is the *ne plus ultra* of perfection.

(To be concluded next week.)

*By the way, it appears to me that an improvement might be made upon the best ploughs now in use. The cutting of the soil appears to be scientifically done; but the clod, when cut, presses with force against the shoulders of the mouldboard, and offers considerable resistance to its advance. Evidently the force which turns it over should, if possible, be made to act at right angles with the track of the plough, whereas at present, it approaches in the same line. Might not an endless chain, or an horizontal wheel of small diameter, be inserted just at the point where the clod presses upon the mould-board, so as to ease the friction? If the pulverization of the clod be the object, that would be more economically effected by rolling and harrowing afterwards.

MYSTERY, THE BANE OF TRUTH.—The ignorant have a passion for believing what they do not understand, and their credulity is commensurate with their ignorance. There is something very attractive in a *mystery;* men swallow a lie greedily, but mumble a good deal before they can get down a truth; they seem to consider one a sugar-plum, and the other a pill.

THE BREEDER & MANAGER.

Improved breeds of swine.—We are asked by so many of our subscribers and others, concerning our breeds of swine, and the prospect of being able to supply pigs of the various kinds, that we are induced to adopt this method of answering them.

We have four distinct breeds in our collection, viz. first, the Barnitz breed, a beautiful white hog, which lives on grass only, during the summer, requires little feeding to make it good pork, weighing at 12 months old about 300 pounds. [See Amer. Farm. vol. 14, page 209, and vol. 15, page 201.]

Second, the Norfolk thin rind breed, imported from England four years ago. They are mostly white, sometimes a little spotted with black. They are a very meaty, small boned breed, remarkably contented and gentle, keep well in pastures or small pens, eat little and grow very fast, skin remarkably thin, and hair short, with large bodies, small heads, and short legs—weighing at 9 months old, 250 to 300 pounds—and at 18 months old, 400 to 460 pounds. [See this volume, page 65.]

Third, the Mackay breed, produced in Massachusetts by various crossings of imported stock, by Capt. John Mackay. They are white, and remarkable for *beauty*. Their growth and size are equal to those of the "Thin rind," and their general quality may be inferred from the facts, stated in the following letters, and in the article on page 113 of this volume.

Fourth, the celebrated Parkinson or Bedford or large Spotted Woburn hog, the favorite of the Duke of Bedford, which were brought from England to this country by Mr. Parkinson many years ago, as a present to General Washington—the following description of them is extracted from letters addressed to us by Sanford Howard, Esq. of Maine, and by Mr. Holmes, the Editor of the Maine Farmer, from the former of whom we obtained our Mackays, and from the latter our Bedfords, which, by the way, partake one fourth of the Mackay blood, and are evidently improved by the cross.

"When I removed from Massachusetts, I purchased and brought with me two pairs of swine, being of the two most celebrated breeds in that state. One pair was of the breed called in the Complete Grazier, "Large Spotted Woburn, or Duke of Bedford breed." This breed, or one very similar, is now well known in New England, and I presume in your vicinity too, as it is said they were some years since to be seen on the farm of Gen. Ridgely, near Baltimore, by the name of the Bedford breed.*

The other pair I purchased of Capt. John Mackay, of Boston. They were of what is now called the Mackay breed.

The competition for the premiums on swine at the Brighton and Concord shows, has been of late years chiefly between these two breeds. Capt. Mackay himself has taken over $200 at these shows, within the last six years.

The characteristics of the Bedford, or Woburn breed are—heads short and small,—backs broad and rather arched,—sides long and deep,—gammons very heavy in proportion to the rest of the carcass,—legs short and small, and constitutions very hardy,—subsist well on grass.

The Bedford sow which I brought with me, I killed last fall, she being three and a half years old. She had produced five litters of pigs, making in number 60, having had the first at a year old. Of this number she raised 45. I fattened her mostly on potatoes, some boiled, and some raw. She weighed within a few pounds of 500, and might easily have been made to weigh 100 pounds more. The gammons were cut off square with the hip joint, (some of the pelvis bone being taken,) and they weighed together 64 pounds! Her skin was thin—flesh fine grained, and of excellent flavor." * * *

"The swine sent you, I consider the best or among the best breeds that we have in Maine. They are the large spotted Woburn breed, (called also the Bedford breed,) and the Mackay breed. The latter are generally, if not always white, ears lop some, though not very large, heads not over large—shoulders broad on the top or *withers*, backs also broad, breadth continues out pretty well to the tail, and the rump comes down more straight than usual, making what a sailor would call a *square stern*, barrels good and chine deep. They are good feeders, have a good sized bone but not too large.

The Bedford breed you will find described (as you probably know) in many of the works on agriculture. They are not, I think, quite so well made behind as the Mackay, but if any thing, are a little broader and deeper in the fore parts—with legs of a medium length."

Of all these kinds our stock is young, except that of the Barnitz breed. No pigs can be expected for sale *from any of this stock* till next spring, when we hope to be able to supply the numerous orders on our register for pigs of each of the above breeds.

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*See Amer. Farmer, Vol. 14, page 182.

Durham Short Horn Cattle.—We are gratified at the result of a recent sale of the stock belonging to our late worthy friend, Henry S. Turner, Esq. of Charlestown, Va. It evinces the undiminished, nay, increasing esteem in which the Short Horns are held in Virginia, where Mr. Turner's superior care and skill in breeding and rearing stock, showed in the clearest light what the breed is capable of being made. The following is the report of the sale, taken from the Virginia Free Press:

Great Sale of Improved Stock.

At the sales, last week, of the improved stock upon the farm of the late Henry S. Turner, Esq. (near Harper's Ferry,) the following extraordinary sales were made:

One Durham Cow, 8 years old, for		$255
One	do Bull, 2 years old,	325
One	do Heifer, 1 year old,	231
One	do Bull Calf, 4 months old,	162
One ¾	do Milch Cow,	130
One ¾	do do do	155
One ½	do do do	120
		$1378

The horses, though of fine blood, did not command prices proportionably high.

A Filly sold for	$205
Saddle horse, (S. Eclipse)	160
do do	150
Riding Mare	165
do do (Tuckahoe)	185
A colt one year old	125

And other horses from $102 down to $55.

South down Sheep, from $6 down to $2½ each.

Prices of Improved Short-Horn Cattle in England.—At the Rev. H. Berry's fourth sale of Improved Short-horns, on the 11th of February, 1834, the following prices were obtained:

Lot 1, 2 years old,	£24	3	0
2. Ditto	36	15	0
3. Ditto. Bought in; £45 bid			
4. 3 years, do. do.			
5. 3 years,	29	18	0
6. Calf, sold with the above.			
7. 3 years,	30	9	0
8. 3 years,	38	17	0
9. 8 years,	32	12	0
10. 9 years,	26	5	0
11. Heifer calf,	15	15	0
12. 10 years,	36	15	0
13. 10 years,	48	6	0
14. 2 years old bull,	39	18	0
15. 1 year old ditto,	45	3	0
16. Bull calf,	15	15	0
17. Ditto,	31	10	0
18. Ditto, 9 weeks old,	32	11	0

[*British Farmers' Magazine.*]

Breaking Colts.—The habits of a horse, whether good or bad, are frequently the result of the first efforts to subject him to the service of man. On these mainly depend his future usefulness. It cannot be denied but that there are a variety of tempers among these noble animals which may require diversified means to effect their subjection; yet in no case should gentleness be disregarded. The practice, too generally prevalent, of letting colts arrive at almost their full vigor before an attempt is made to accustom them to the *bit* or *saddle*, is believed to be erroneous. By the *saddle*, we do not mean that the colt should be made to bear heavy burdens before he has arrived at a suitable age; but by an early use of it, he will become so habituated to its use, as to receive at a proper time, the addition of weight without re-

monstrance or fretfulness. If the colt has acquired considerable age before an attempt is made to curb his waywardness, nothing should be neglected to render the attempt successful and decisive. If the colt is to be broke to the saddle, care should be used in securing it firmly upon him, because carelessness in this, may lead to bruised limbs, besides being a positive injury to the temper of the horse. To prevent the colt from rearing, and falling backwards, as is frequently the case, a rope should encircle his body near the fore legs—another, passing over his neck, and between his legs, should be firmly tied to the one enclosing his body, which will effectually prevent his rearing. For further suggestions on this point, we subjoin the following from *Deane's* New England Farmer.

"The way of breaking a young horse that is mostly used in this country, is highly absurd, hurtful and dangerous. He is mounted and ridden before he has been used to the bridle or to bearing any weight on his back. If he will not go forward he is most unmercifully beaten; by which his spirits are broken, and his strength impaired. If he rears up, he is pulled backwards, with the risk of hurting both horse and man. If he runs and starts, as he probably will under such management, he flings the rider, perhaps is frightened, gains his liberty, and is encouraged to do just so the next opportunity; and the unfortunate rider blesses himself, as he has reason to do, if he escapes without broken limbs. Or if the horse should chance to go kindly, the rider continues the exercise till the horse is fatigued, discouraged and injured.

"Instead of this mad management, the way practised in the older countries should be adopted. Let a horse first of all be tamed with the bridle, by leading him again and again; in the first place after, or by the side of another horse; and after he walks well, bring him to trot after his leader. In the next place, put on the saddle, and lead him in that time after time. Then lay a small weight on the saddle, and if he be apt to start, fasten it, that it may not be flung off, increasing the weight from time to time, till he learns to carry what is equal to a man's weight. Lastly, let a man gently mount him, while another holds him by the bridle, and fix himself firmly in the saddle. The place of riding is recommended to be a ploughed field. Let him thus be ridden with a horse going before him, till he learns the use of the bit, and will stop, or go forward at the pleasure of the rider, and without the application of much force. Being exercised in this manner a few times, and treated with all possible gentleness, there will be no more occasion for leading him. He will go well of himself; and be thoroughly broken, without so much as giving him one blow, and without danger or fatigue to the horse or his rider. And, what is much to be regarded, the horse's spirits will be preserved, though he be sufficiently tamed. In teaching a horse to draw, gentleness must be used. He should be tried first in company with other horses, whether in carting or ploughing; and the draught should not be so heavy as to fret him or put him to great exertion till he has learned to draw steadily. After this he may be put to a pleasure carriage, but coupled with another rather than alone, and to a sleigh rather than a chaise."

[From the Cultivator.]

Management of Sheep.

Sir—As I have seen but little in the Cultivator on the management of sheep, and am interested in that part of agricultural pursuits, I venture to direct to you a few thoughts in hopes it may call the attention of others to the subject, more competent than myself. It is allowed by all as I am informed, that the grub in the head of sheep is caused by a fly in the hot season; to avoid the bad effects of which, I would recommend that they have better pasture in the months of July and August, so as to be able to get their supply of food without being obliged to feed in the middle of the day. I have observed that sheep will do well on very short feed early in the season, and think it best if they are to be kept short, it should be done at that time, and reserve for them good feed through the hot season. Flocks of sheep kept close are more likely to be troubled with them than those well kept, and some suppose want of strength to throw off the grub makes the difference, but I think it is being under the necessity of feeding in the heat of the day. Short keeping makes fine wool, but I believe it is best for every wool grower not to overstock, but keep well what he does keep. My practice has been, to select in the fall my poorest sheep from the others and give them better feed, so that all shall be in good condition for winter; in managing in that way, I have lost less sheep in winter than in summer—my lambs I wean the latter part of August and give them the best feed I have, till winter; about the first of November, or whenever the feed becomes injured with frost, I begin to feed them oats in the sheaf; to 60 or 70 lambs I give two bundles a day till about the first of January, and then one bundle a day till February, after which I feed no more grain. In that way I have been able to get my lambs through the winter, strong and healthy, and out of the above number, for several years I have not lost more than to average one a year.

A sanguinary mode of Dunning.—Some of our editorial brethren "down east" are "nation cute," and equally sly. One of their latest improvements is a new and ingenious method of hinting to their subscribers without *saying* a word, that there is something due on subscription. This very important object is effected by writing the direction of the papers of delinquent subscribers with red ink or pencil. This "beats all nater."

Early Snow—We have a letter from a friend, (says the N. Y. Commercial Advertiser,) written on Tuesday evening, at Canandaigua, in which he says, on Saturday morning last the weather was oppressively warm, but towards evening we had a cold storm, since which the weather has been unusually cold for the season, and fire is as necessary as in the depth of winter. Yesterday, in Tioga county, snow fell for two hours, and last night the frost was severe; this morning, some thirty miles east of this, ice formed of considerable thickness.

What can the virtues of our ancestors profit us, if we do not imitate them.

THE GARDENER.

Management of Ornamental Plants for the month of October.—The following article is from the American Flower Garden Directory:

Flower Garden.

Of planting various Bulbous Flower Roots.

From the middle of October to the beginning of November is the best period for a general planting of Dutch bulbs.

Crocuses are the earliest in flower, and may be planted about six inches off the edgings, about four inches apart and two deep, or in beds four feet wide; the varieties selected and planted across the bed in rows of distinct colors, they flowering so early, and in that manner have a grand effect. There are above sixty varieties to be had.

Hyacinths. The ground that was prepared for these last month, should be all divided into beds four feet wide, leaving between each, alleys of twenty inches. Skim off three inches of the surface of the former into the latter, level the bed smoothly with the rake, and mark it off in rows eight inches apart. Plant the roots in the row eight inches asunder. Thus they will be squares of eight inches, and by planting the different colors alternately the bed will be beautifully diversified. Press each root gently down with the hand, that in covering up they may not be displaced. Put about four inches of earth over the crowns, which will make the beds from two to three inches higher than the alleys. The beds before and after planting should be gently rounded from the middle to each side, to let the rain pass off. Finish all by raking evenly, straighten the edgings with the lime, and clear out the alleys or pathways.

Tulips like a lighter and richer earth than Hyacinths. Prepare the beds in the same manner, and so as the roots will stand nine inches apart each way; cover them five inches deep, as the new bulbs are produced above the old.

If it is intended to screen either of these while in flower, the beds should be made wider. Where two beds are to be shaded under one awning, make the alleys alternately two or three feet wide; the one two feet wide to be under the awning.

Polyanthus and Italian Narcissus may be planted in every respect as Hyacinths, only they require a lighter and richer soil.

Jonquils. Plant these in the same soil as Tulips, six inches apart, and cover three inches deep. They do not flower so well the first year as in the second and third, therefore should only be lifted every third year.

Anemones and Ranunculuses. These roots like a fresh rich, well pulverised, loamy soil. In light sandy soils they will languish in early droughts, and sometimes do not show their flowers fully. Cow manure is the best to use for enriching the soil. The whole should be well mixed and incorporated to the depth of eighteen or twenty inches. The roots may be planted in four foot beds, or in such a manner as a low frame of boards can be placed over them, when the winter sets in very severe. If intended to be shaded while in flower, leave a sufficiency of space in the alleys as directed for Tulips and Hyacinths. Do

not raise the beds above one inch higher than the alleys, and from the surface level, in order to detain rather than throw off moisture. Then draw drills exactly two inches deep and six inches apart across the bed. In these place the roots, claws down, about four inches distant from each other. The roots of the Anemones are flat, and the side on which there are small protuberances is that from which the stems proceed. Press each root a little down with the hand, and cover all carefully, so as not to displace them. Smooth the surface with the rake, leaving the bed quite level.

Many other bulbous flowers might be added to the above; but as their culture is so similar, it would be superfluous to say more of them. They should be allowed space and depth according to the size of the bulb; a covering of two inches for the smallest, and five for the largest, will generally answer, and the intermediate roots in proportion. We will enumerate a few of the different kinds, Starch and Musk Hyacinths; of Narcissus, the Paper, Grand Monarque, and Nodding, with the two previously mentioned, are the most profuse in flower. Some of them will have above twelve flowers on one stem. Of Lilies, all the varieties of Martagon, Tigrinum and Chalcedonicum, with our native species and varieties. Of Iris Lustianica, two varieties, yellow and blue; Xiphioides, or Ziphioides; and Persica, are the finest of the bulbous sorts. Snowdrop, with several other minor bulbs.

All of these flowering bulbs may be advantageously planted in patches through the garden by taking out about one square foot of earth. Break it well, and if poor enrich it. Plant four bulbs in each of the same color, and the clumps that are contiguous to contain different colours.

Planting and Transplanting.—This is a very proper period to plant the beautiful and early flowering Pyrus japonica, now called Cydonia japonica. The blossoms are of a rich scarlet color. It is the earliest flowering shrub of the garden, and deciduous, though said by some to be "an evergreen." The plant is bushy, and well adapted for single plants in grass plats, or forming low ornamental hedges. There is likewise C. j. alba, a fine white variety of the same habit, and both are of the hardiest nature—also for the various species of Anemones and all the herbaceous Pæonias.

Of the latter there are above nineteen species and twenty two varieties, a few of which are particularly esteemed, and exceedingly handsome. P. edulis whitliji is a splendid large double P. edulis white; P. umei is a beautiful large double dark blush; P. edulis fragrans is a fine large double scarlet, rosescented variety. These three plants ought to be in every garden. The flowers are full in the centre, and frequently above six inches in diameter; P. alba chinensis is said to be the largest and finest of the herbaceous sorts; color pure white, with pink at the bottom of the petals—it is a scarce variety; P. paradoxa fimbatria, fringed double red, and esteemed; P. officinalis rubra is the common double red. There are several other very fine single species and varieties, the flowers of which are principally red or blush, but none so magnificent as the above mentioned. This is perhaps a more favorable period to plant Dodecatheon than March; for its character see that month of this department. Asclepias tuberosa should now be planted.

Double Primrose, Polyan hus, Daisies, &c. Any of these that were planted in shaded situations in spring, and have been preserved through the summer, should have for their farther protection a bed well sheltered from the north-west, in which they should be planted four inches apart. Give them a few sprinklings of water in the morning, and have a temporary frame of rough boards put together to place over them during the severity of winter. The frame may be covered with the same in place of grass, which must be kept over them while they are in a frozen state.

Any other plants that are in the ground, which are intended to be protected with frames through the winter, ought to be immediately lifted and potted; and treated as directed for all new potted plants.

Grass and Gravel Walks.—The former should be trimly cut and well rolled this month, that they may appear neat all winter. Never allow decayed leaves to lay any time upon them, as they are apt to rot out the grass. The latter should be divested of every weed, and receive a firm rolling. Clear them at all times of leaves and other litter. These, if on a declivity, and have not a firm substantial bottom, will be subject to be cut up with every heavy rain. A break should be put in every twenty, forty, or eighty feet, to throw off the water. A strong plank will answer perfectly well, but in such situations we would prefer grass walks.

Planting Evergreens.—This month is the best period in autumn to plant these shrubs, and where there is a great extent to be planted it would be advisable to do a part of it now; but we give the preference to April, which see for directions.

General Observations.—When the plantings of bulbs, &c. are finished, every part of the garden should have a thorough cleaning. All annual flowers will have passed the season of their beauty; therefore, remove the decayed flowers, stems or haulm, and trim off the borders. Dig all vacant ground, especially that intended to be planted with shrubs in the ensuing spring; which ought to be dug from one to two feet deep. Roses delight in a deep light soil.

ROOMS.

Have a stage or stages, as described last month, in the situations where they are intended to remain all winter; place the plants on them from the first to the eighth of this month, beginning with the tallest on the top, graduating to the bottom. It is desirable to place flats or saucers under each, to prevent the water from falling to the floor, and the water should be emptied from the flats of all except those of Calla and Hydrangea. The latter while dormant should be kept only a little moist.

Previous to taking in the plants, they should be divested of every decayed leaf, insects, and all contracted dust, having their shoots nearly tied up, and every one in correct order. Every leaf of the Camellias ought to be sponged, and the plants placed in a cool, airy exposure, shaded from the direct rays of the sun. If the flower buds are too crowded, picking off the weakest will preserve the remainder in greater perfection, and prevent them in part from falling off. Do not on any occasion keep them in a room where there is much fire heat, as the flower buds will not expand in an arid atmosphere. (See Green-house this month more largely on this subject.)

Of Bulbous Roots.—Those that are intended to flower in glasses should be placed therein this month and kept in a cool room. After the fibres begin to push a few shoots, the glasses may be taken to the warmest apartments to cause them to flower early. Bring a few from the coldest to the warmest every two weeks, and thus a succession of bloom may be kept up from January to March. Where the roots intended for pots are still out of the ground, the sooner they are planted the better.

Cape Bulbs. All that are unplanted, and offering to grow, should be put in pots forthwith. Ample directions are given for the planting of these in the two preceding months.

Report Rubus rosæfolius, or Bramble-rose. They should have pots one size larger than those they are now in. To make them flower profusely, when done blooming in May, divide them, and put only a few stems in one pot, and repot them in this month, as above directed.

General Observations.—Any herbaceous plants in the collection ought to be set aside, and the water in part withheld. When the stems and foliage are decayed, the plants may be put up in a cool cellar, where they will not be in danger of frost, and be permitted to remain there until they begin to grow; then bring them to the light, and treat as directed for these kinds of plants. Deciduous plants may be treated in a similar manner.

MISCELLANEOUS.

RICE DELICACIES.

So little seems to be known about the various methods of cooking Rice, that we have concluded to present our readers with the following receipts. By the by, why is it that the Mills do not prepare *Rice flour?*

To make Loaf Rice Bread.—Boil a pint of rice soft, and add a pint of leaven, then three quarters of the flour, put it to rise in a tin or earthen vessel, until it has risen sufficiently, divide it into three parts, then bake it as other bread, and you will have three large loaves.

To make Journey or Johnny Cake.—To three spoonfuls of soft boiled rice, add a small tea-cup of water or milk, then add six spoonfuls of the flour, which will make a large Journey Cake, or six waffles.

To make Rice Cakes.—Take a pint of soft boiled rice, a half pint of milk or water, to which add twelve spoonfuls of the flour—divide it into small cakes, and bake them in a brick oven.

To make Wafers.—Take a pint of warm water, a tea-spoonful of salt, add a pint of the flour, and it will give you two dozen wafers.

To make Rice Ruffs.—To a pint of the flour add a tea-spoonful of salt, a pint of boiling water—beat up four eggs, stir them well together, put from two to three spoonfuls of fat in a pan, make it boiling hot, and drop a spoonful of the mixture into the fat, as you do in making common fritters.

To make a Pudding.—Take a quart of milk, add a pint of the flour, boil them to a pap, beat up six eggs, to which add six spoonfuls of Havana sugar and a spoonful of butter, which when well beaten together, add them to the milk and flour—grease the pan if is to be made in, grate nutmeg over the mixture, and bake it.

Another.—Boil one pint of milk, mix two table spoonfuls of rice flour with a little cold milk, stir it in while the milk is boiling, afterwards add a small piece of butter, five eggs, one nutmeg, one glass of wine, the juice and peel of one lemon and suger to your taste.

Rice Flour Sponge Cake.—Make like other Sponge Cake, except that you use three quarters of a pound of rice flour, thirteen eggs, leaving out four whites, and add a little salt.

Rice Flour Blanc-Mange.—Boil one quart of milk, season it to you taste with sugar, rose or peach water. Take four table-spoons heaping full of rice flour, mix it very smooth with cold milk, add this to the other milk while boiling, stirring it well. Let all boil together about ten minutes, stirring occasionally, then pour it into moulds and put it by to cool. This is a very favorite article for invalids.

Rice Cake.—Mix ten ounces of gronnd rice, three ounces of flour, eight oz. of powdered sugar; then sift those articles by degrees into 8 yolks and 6 whites of eggs, and the grated peel of one lemon. Mix the whole well together in a tin stew-pan over a very slow fire with a whisk, then put it immediately into the oven in the same pan, and bake forty minutes.

Plain Rice Pudding.—Wash and pick some rice; throw among it some alspice finely powdered, but not much; tie the rice in a cloth, and leave plenty of room for it to swell. Boil it in a quantity of water for an hour or two, when done, eat it with butter and sugar, or milk.—Put in a lemon peel if you choose.

Rice Pudding with Fruit.—Swell the rice with a very little milk over the fire, then mix fruit of any kind with it, currants, gooseberries scalded, pared and quartered apples, raisins or black currants, with one egg in the rice to bind it. Boil well and serve with butter and sugar. If apples are used, it is better to enclose them in the rice, as with paste.—This makes a very delicious pudding.

A Dutch Rice Pudding.—Soak four ounces of rice in warm water half an hour, drain the water from it, and throw it into a stewpan, with half a pint of milk, a stick of cinnamon, and simmer it till tender. When cold, add four whole eggs well beaten, two oz. of butter, melted in a tea-cupful of cream, 3 oz. of sugar, a quarter of a nutmeg, and some lemon peel. Put a light puff paste into a mould or dish, and bake it in a quick oven.

A Rich Rice Pudding.—Boil half a pound of rice in water with a little salt, till quite tender, drain it dry. Mix it with the yolks and whites of four eggs, a quarter of a pint of cream with two ounces of butter melted into it, four ounces of beef suet or marrow, finely spread, three quarters of a pound of currants, two spoonsful of brandy, one of peach water or nutmeg and lemon peel, when well mixed, put a paste round the edge, and fill the dish; slices of candied orange, lemon, or citron, if approved. Bake in a moderate oven.

Savory Rice.—Wash and pick some rice, stew it very gently in a small quantity of veal, or rich mutton broth, with an onion, a blade of mace, pepper and salt, when swelled, but not boiled to mash, dry it on the shallow end of a sieve before the fire, and either serve it dry, or put it in the middle of a dish, and pour the gravy round, having heated it.

Besides the above, it is a good food for children; and it may also be used for the thickening of soups, custards, pies, &c.

Chenam.—Our merchants are indebted to Captain Thomas Bennett, of the New York and Liverpool packet line, for the introduction of this article into use here. Chenam, (the East India name) is made by mixing slacked and fine pulverized lime with whale oil, to the consistency of mortar. It is so tenacious, that it adheres immediately wherever applied, and is entirely impervious to water, and becomes perfectly hard in it.

It is laid on to ships' bottoms with towels, sometimes under the sheathing, and sometimes between the copper and the sheathing; and, in some instances, in both places. The copper is put on while the Chenam is soft, and adheres to it so completely that no water passes between them; and it is said that copper in vessels which have a coat of Chenam wears nearly double the usual time.

Whale oil is used here in making it, because it fully answers the purpose, and is two-thirds cheaper than vegetable oil—but vegetable oil makes much the best Chenam, becoming after a short time as hard as a stone. It is suggested that the celebrated Mortar of the Ancients was made of lime and vegetable oil.

I understand that some experiment will be made here on roots and outside of houses, with Chenam, as it is believed it will effectually resist the fogs and frosts of our climate, which the common rough casting does not.—*New Bedford Gaz. & Courier.*

Crimson Clover.—The following notice is extracted from the fifth edition of the Code of Agriculture, p. 433, and its object is to bring into extensive use, as a field crop, a plant hitherto cultivated only in our gardens, as a curious and rather pretty looking annual:—"It is the subject of astonishment that this valuable plant (the *Trifolium incarnatum*) should not have been long ago introduced into this country, and cultivated on an extensive scale. If sown in autumn, after a crop of potatoes and other roots, it produces next spring a crop fit to be cut for soiling cattle, eight days earlier than lucerne, and a fortnight before red clover. Care, however, must be taken to have good seed, and not to sow it too deep. It produces two excellent crops in one year, the first of which should be cut as soon as it comes into flower, and the second will produce a considerable quantity of seed. Fom its early growth in spring, when other articles for feeding stock with advantage are so difficult to be obtained, it is likely to become a valuable acquisition to British husbandry." If this clover—the seed of which is, we believe, to be had in considerable quantity of the seed merchants in this country—be sown in spring, it is considered that it will produce a full crop in Scotland in the months of July or August, and must be of great value to those on whose lands the common red clover does not succeed, or where the crop may have partially failed. It is proper to remark, that this is an annual plant, and therefore should only be employed in partial husbandry.

Influence of Light on Color.—It frequently happens in America, that clouds and rain obscure the atmosphere for several days together, and that during this time, buds of entire forests expand themselves into leaves. These leaves assume a pallid hue till the sun appears, when within the short period of six hours of clear sky and bright sunshine, their color is changed to a green. A writer in Silliman's *Journal* mentions a forest on which the sun had not shone for twenty days. The leaves, during this period, had expanded to their full size, but were almost white. One forenoon the sun began to shine in full brightness. "The color of the forest absolutely changed so fast that we could perceive its progress. By the middle of the afternoon the whole of these extensive forests, many miles in length, presented their usual summer dress."—(*Silliman's Jour.* xiii. p. 124.)

Broom-corn—There has been a stir among the broom manufacturers and others within a few days, and large quantities of the growing broom-brush in Hadley, Hatfield, and other river towns, have been purchased at seven cents per pound, which is an advance of one cent or more from the price given last year. Some, uninformed of the rise, have sold at 5½ or 6 cents, and many are holding on, intending to get more than seven cents. The crops of broom-corn in New Jersey and Ohio, are said to be good, and some persons do not see any sufficient cause for the present advance; but we conclude that the Shakers and other purchasers know what they are doing.

A tried Receipt for burns.—Keep on hand a saturated solution of alum (four ounces in a quart of hot water) dip a cotton cloth in this solution, lay it immediately on the burn. As soon as it shall have become hot or dry, replace it by another, and thus continue it as often as it dries, which it will, at first, do very rapidly. The pain immediately ceases, and in twenty-four hours under this treatment the wound will be healed, especially if the solution be applied before the blisters are formed. The astringent and drying quality of the alum completely prevents them. The deepest burns, those caused by boiling water, drops of melted phosphorus, gunpowder, fulminating powder, &c. have all been cured by this specific.

CONTENTS OF THIS NUMBER.

Nos of this paper wanted—Perry & pears—Blood horses imported—S. C. on Rye Grass—P. Sandborn on cutting cornstalks—Premium on Silk and Mulberry—Nurseries—Ribbon Grass—Butter Making—Schools for Farmers' sons—Charms of mystery—Our four breeds of Swine—Sales of Durham S. H. Cattle in Virginia—dito in England—Breaking colts—Management of Sheep—New mode of dunning—Early Snow—Management of Ornamental plants for October—Rice Delicacies—Chenam—Crimson Clover—Influence of light on color—Broomcorn—Receipt for Burns.

ADVERTISEMENTS

A RARE CHANCE.

THE subscriber has the selling of the following Stock, at prices lower than of any similar stock he has ever known offered in this country. All the thorough bred Cattle in the following list, were raised by Dr. David Hosack, at his farm, at Hyde Park, N. Y. where he has one of the finest stocks of Durham Short Horns that exists in the U. States. These animals will be for private sale till Saturday, 25th inst. (day after the termination of the Baltimore races,) at 12 o'clock, when all that may remain unsold will be offered at public auction, at the Three Tun Tavern. The subscriber has recently inspected every individual comprised in the following list, and therefore pledges himself that they will be found to answer the description here given. They are numbered, for convenient reference. Gentlemen wishing to improve their stock are not likely to have frequently such opportunities for doing it as the one now offered them.

Thorough-bred Durham Short-Horns.

No. 1—A Bull, about 18 months old, dun and white, of good size, and very handsome. This is a valuable animal. Price $200.

No. 2—A Heifer, about 18 months old, red and white, of good size, and very handsome She is believed to be in calf to a thorough-bred bull. Price $150.

No. 3—A Heifer, of same age and description in *all* respects as No. 2, and same price. She is a great beauty.

Calves.

No. 4—A white Bull.
5—A dun and white do.
6—A red and white do.
7—A red and white Heifer.
8—A white Heifer.

These are all calves of 1834, of the same stock as the above described, and equally promising. Prices from $80 to $120 each.—Each of the above animals will be sold with a well authenticated pedigree of pure blood.

No 9—A Heifer Calf, red and white.
10 do. do. do.

These two calves are of the same stock as those previously described, and equally handsome, but the pedigrees of their dams being lost, they will be sold without pedigrees, though they are *known* to be thorough-bred. Price $50 each.

No. 11—A thorough-bred bull, about 15 months old, red and white, of good size and form—a very valuable animal. He was bred by a gentleman of Philadelphia, who has imported a few thorough-bred cattle for his own use, but as he does not deal in them, he keeps no written pedigrees of his stock. His certificate, however, which will accompany the bull, is a sufficient guarantee of the purity of his blood. The brother of this bull, 3 years old, was sold this summer by John Barney, Esq. for $300. This will be sold for $200.

Alloyed Durham Short-Horns.

The following, though not thorough-bred, are (several of them) very fine animals.

No. 12—A three-fourths blood Bull, nearly white, two years old in May last—very large—was got by Hector, a thorough-bred bull, raised by Mr. Powell, out of a fine half-blood cow. Price $100.

No. 13—A seven-eighths blood Bull, red and white, two years old in July last, of middling size, and very handsome—got by the celebrated thorough-bred bull Bolivar, out of a three-fourths blood cow. Price $100.

No. 14—A three-fourths blood Bull, red and white, one year old—got by Bolivar, out of a half-blood cow. Price $75.

No. 15—A fifteen-sixteenths Bull Calf, five months old, white and red—got by Apollo, (thorough-bred) out of a seven-eighths blood cow. He is a calf of extraordinary beauty, and great promise. Price $75.

No. 16—A seven-eighths Cow, (the dam of No. 15), a fine breeder, for which alone she has been kept. She is 10 years old, in good health and condition, and is supposed to be in calf by No. 12 or 13. Price $50.

No. 17—A three-fourths blood Heifer, 3 years old, white—got by Bolivar, out of a half-blood cow. She is small, but very handsome. She has had one calf, and has proved herself a fair milker, and is in calf now to No. 12 or 13. Price $75.

Sheep.

No. 18—A Buck, of the New Leicester or Improved Bakewell breed, one year old—a good animal. Price $50.

No. 19—A Buck, of the pure Bakewell breed, two years old; a valuable breeder. Price $50.

No. 20—A Buck of last spring; of the Cotswold breed—very large and likely. Price $50.

Devon Cattle.

No. 21—One Devon Bull five years old. $100.

No. 22—One Devon Cow with a calf by her side. $100.

No. 23—One Devon Cow giving milk. $75.

Nos. 24 -5 and -6—Three Devon Heifers three years old, in calf by the above bull, each $75.

Several other fine cattle, and probably some other farm stock will be offered at private or public sale.

ALSO :—Some excellent implements and machinery—among them the Cylindrical Straw Cutter, and Lane's Patent Endless Chain Horse Power and Threshing Machine, *in operation*.

I. I. HITCHCOCK.
oc 21 American Farmer Establishment.

LINNÆAN GARDEN AND NURSERIES,

FLUSHING NEAR NEW YORK.

WM. PRINCE & SONS have just published their *New Catalogue with greatly reduced prices*—application therefor must be made *direct to them per mail*. Every Department of the Establishment is in the most perfect condition in regard to the accuracy and superiority of its productions—and strangers are solicited to visit it and judge for themselves. The Fruit Trees are of large size, and in the most vigorous state, suitable for Orchards where prompt bearing is desired. Among these are the fine New Flemish Pears. Ornamental Trees and Flowering Shrubs can be furnished of the largest size, worth treble the price of small ones, as several years are thus saved in embellishment. The collections of Green House Plants, and hardy Flowering plants are particularly rich and interesting. The assortments of Roses and Double Dahlias comprise all the new splendid varieties, and each collection occupies above an acre of ground. Splendid Dahlias will now be supplied at $3, $4½ and $6 per dozen—each root a distinct named variety selected by us.—Of Bulbous Flower Roots the stock is so greatly increased, that they will be sold at very low rates.

Where a large number of trees, &c. is ordered, a discount will be made, and a credit allowed if so desired. The owners of nurseries and other venders of trees and seeds will be supplied at a liberal discount, and a convenient credit.

The assortment of garden, field and flower seeds, is exceedingly extensive, and forms a complete concentration of the choicest varieties known in Europe, and this country, all of which have been raised under our own inspection, or grown expressly for us, by our European correspondents. Their accuracy and excellence are expressly guaranteed, and *we ask no payment where the seeds do not prove exactly as represented.* Among the field seeds are the following: Perennial Ryegrass, New Italian do., Lucerne, Dutch White Clover, early Angus Oats, English Potatoe Oats, weighing 44 lbs. per bushel, Orchard Grass, tall Oats Grass, Trifolium Incarnatum, or early Crimson Clover, and 100 bushels Taylor's Forty fold Potatoe, also 50 bushels Potatoe Onions.—Venders of seeds, will be supplied at the most moderate rates possible, and at a credit to comport with their convenience.

Orders sent *direct per mail*, will have immediate dispatch, and every invoice emanating from us, has our *printed heading*, and *signature* and *no others are guaranteed.*

oc 21 3t

WHITE TURKIES.

I HAVE now ready for sale, several pairs of these truly beautiful fowls, at $5 a pair, they are of this year's crop. I. I. HITCHCOCK,
oc 21 American Farmer Establishment.

WANTED,

AT the American Farmer Establishment, ORCHARD GRASS SEED, for which the highest price will be paid; also, CLOVER SEED and TIMOTHY SEED will be either bought or sold on commission, by
Sept. 16. I. I. HITCHCOCK.

GAMA GRASS SEED

JUST received, and for sale at this Establishment—Price 50 cents per ounce.

PUPPIES.

SEVERAL YOUNG POINTERS of the very best blood, will be old enough for sale, early in November. Also several young GREY HOUND sluts, from the pair sent from Europe to the president of the U. S., and by him presented to this establishment last fall.

Also one SLUT, one year old, from my grey hound slut, by a very fine imported Pointer. She appears to have the Pointer's nose and the shape and agility of the greyhound—color black. Oct. 7.

MORUS MULTICAULIS.

THE subscriber has on hand a few hundred of this celebrated Tree, unrivalled in the quality of its leaves as food for the silk worm, for which he is ready to receive orders (accompanied by the cash) with *particular* directions for the delivery of the trees on or after the first of Nov. next. Price 50 cents each, $5 per dozen, or $40 per hundred.

The success and ease with which this tree is propagated, the extraordinary quickness of its growth, the superiority of its leaves over *all* others for the silk culture, and its uncommon luxuriance and beauty, altogether recommend it to the favorable notice of *every farmer* as a most valuable acquisition. I. I. HITCHCOCK,
aug. 26. Amer. Farm. Establishment.

AGENCY FOR TREES, &c.

THE subscriber respectfully offers his services to his customers and the public generally, as agent for the procurement of Fruit and other Trees. It may not be generally understood or duly considered, that few nurseries contain *all* kinds of trees in equal perfection. One, for instance, is celebrated for its fine apple trees, another for its peaches, and a third for its plums or pears, while scarce any of them can make up a collection of *all kinds* of trees of the best quality. In this respect the subscriber flatters himself that he possesses peculiar advantages. His own nursery is not extensive or forward enough to afford many trees for sale yet, and his acquaintance with nearly all the most eminent nurserymen in this country, and of the peculiar excellencies of their respective establishments enables him to select from them all, probably a better collection of fruit trees than any one of them can furnish. Trees ordered from any particular nursery, or to be selected by me, will be charged at nursery prices and 10 per cent commission added. Orders ought to be forwarded immediately, and all confided to the subscriber's agency shall receive his best attention.

I. I. HITCHCOCK,
Oct. 14. Amer. Farmer Establishment.

FINE GEESE.

FOR sale at this establishment, a GANDER and two GEESE of extraordinary size. They are believed to be a cross of the large Bremen goose upon the grey goose. Their color is grey and white. The person from whom they were procured, assured us that individuals of this breed, have been fattened to weigh as high as 25 pounds. Price $5 for the three. Sept. 16.

A SAXONY RAM FOR SALE.

HE is of last winter's yeaning and represented as a very fine one. His sire cost $1,200, and this son is "worthy of him," and yet will be sold for $100, and perhaps a shade less. Enquire of I. I. HITCHCOCK,
Sep. 30 American Farmer Establishment.

THE COMPLETE FARMER.

JUST PUBLISHED and for sale at this establishment, price $1, "The Complete Farmer and Rural Economist, containing a Compendious epitome of the most important branches of Agriculture, and Rural Economy. By Thomas G. Fessenden, Editor of the New England Farmer." "Agriculture is the art of arts: without it man must be a savage, and the world a wilderness."
june 24

SEED RYE.

WINTER RYE of an excellent quality, suitable for seed, for sale at 80 cents per bushel, by
I. I. HITCHCOCK,
Sep. 2. American Farmer Establishment.

SEVERAL FINE JACKASSES,

FOR sale at prices from $100 to $1000.—GOOD JENNIES are wanted. Enquire of
I. I. HITCHCOCK,
Oct. 7. American Farmer Establishmen.

THE FARMER & GARDENER;

AND LIVE-STOCK BREEDER & MANAGER.

CONDUCTED BY I. IRVINE HITCHCOCK, AND ISSUED EVERY TUESDAY FROM THE AMERICAN FARMER ESTABLISHMENT, AT $5 PER ANNUM, IN ADVANCE

No. 26. **BALTIMORE, OCTOBER 28, 1834.** **Vol. I**

☞This publication is the *successor* of the late
AMERICAN FARMER,
(which is discontinued,) and is published at the same office, at five dollars per year, payable in advance.
☞When this is done, 50 cents worth of any kind of seeds on hand will be delivered or sent to the order of the subscriber with his receipt.

American Farmer Establishment.

BALTIMORE: TUESDAY, OCTOBER 28, 1834.

MORUS MULTICAULIS.—The more we become acquainted with this tree the better we like it.—Last March we cut off even with the ground every tree of it that we had left after our winter's sales—for the purpose of propagating it. The number was we think about 60 or 70. From these we have now ready for sale, being from three to four feet high, about sixteen hundred trees, all raised this year from the *bodies and limbs* of the one year old trees mentioned. But the growth from the old roots is astonishing—from two to eight shoots have grown from each of them to the height of from six to nine feet, every one of which as well as of the young trees first mentioned, is loaded with leaves of the most luxuriant growth, measuring from 10 or 11 inches by 13 or 14 downwards to half those dimensions, and of as bright and dark a green now as they were in June. One of the peculiarities of this tree appears to be the continuance till very late in the fall of the unrivalled green of its foliage. This induces the expectation that it will yet be found a most valuable shade tree for either the street or the lawn. In short, unless we are greatly mistaken in its character, it will yet be found one of the most valuable acquisitions to our country which has ever reached it from the celestial empire, not excepting "*Julia Foochee ching-chang-king*, daughter of *Hong-wang-tzang-tzee-king*, a distinguished citizen of the celestial empire, residing in the suburbs of Canton," who has just arrived at New York to show her "darling" little feet only three inches long.

WASHINGTON, N. C. 1834, October.

To the Editor of the Farmer and Gardener.

Dear Sir.—My purpose is not either to trouble you or to make myself conspicuous as a farmer, but to inform myself in matters with which I am but slightly acquainted; and as your paper is intended to furnish such information rather than discuss matters in which "homespun coats" like myself, take no interest, I am thus forward in troubling you; taking this opportunity of offering my thanks for the very able reply to my last.

I see in your last number, some observations on a kind of corn, which may be eaten (or kept for that purpose) through the winter; I have some of this corn—having procured a handful of an old Dutch gentleman, in Schenectady, N. Y., but it being a bad year for corn, I got only a small quantity in return. Can you inform me whether its qualities are superior for feeding, or is it only fit for the table? from the fact of its being rendered soft in winter, I should suppose it would be preferable to the common Indian corn for feeding.

But the inquiry which I chiefly wish to make at present, is relative to manuring with clover. I have about 100 acres of land which will now bring me about 20 bushels of corn to the acre, it can be made to bring almost double, and its situation is such that I wish it to do so as soon as possible. I wish to know what kind of clover seed, how much to the acre, when and how to sow them, and in what manner to lime and plaister it, and how the ground should be prepared to receive the seed, when to cut the grass, and when to turn in the sod. If you or some of your correspondents will oblige me, by a detailed account of the whole process necessary, I will promise you no more trouble, and "should you travel my way," a good bowl of milk, &c. from my own premises, as long as you wish to stay, besides Gama grass or oats for your horse. Yours, &c.

H. C. HOYT.

To our friend's enquiry in regard to the Sugar corn, we reply unhesitatingly that it would disappoint his hopes as a field crop.

In regard to the use of clover, we do not feel very competent to give particular directions—we will however do what we can this week, and will shortly, perhaps in our next number, publish something from a more competent hand. We know that the practice of manuring with clover is in general favor among farmers, especially at the South. The kind most used is the common red, but the northern or tall sapling clover is by some preferred. The quantity generally prescribed for an acre is about four quarts. It may be sown either in the fall or winter or early in the spring—either alone or with grain. When it is fairly above the ground, one bushel of ground plaister should be sown broadcast to the acre. To lime or not to lime—this is a question, and a correct answer to it must depend on the quality—that is, the relative proportions of the constituent parts of the soil, which would be best ascertained by an analysis of it chemically.

We hardly need say that to answer communications such as the above, is not considered by us a trouble, or a task, but as business directly in our line. We thank our kind friend for his offer of hospitality, and assure him that if we pass his way, (and stranger things happen every year) we shall do ourselves the pleasure of paying our respects to him.

☞We are requested to state that the report of the committee of the Horticultural Society of Maryland, in relation to the late exhibition, will be published in our next number.

MARYLAND HORTICULTURAL SOCIETY.

Saturday, October 25, 1834.

The following articles were exhibited:—

By Henry Schroeder, Esq. a large turnip rooted Beet, weighing 7 lbs. raised by Dr. Goldsborough, of Frederick, Md.

Aaron Burr presented a very fine Egg Plant, measuring 20 inches in circumference.

Capt. Wm. Partlow presented a fine specimen of Sugar Cane.

Gideon B. Smith exhibited a specimen of the fruit of the Maclura, or Osage Orange, with *perfect seed*, produced by Gen. T. M. Forman of Cecil. It is believed that this is the first instance of the production of fruit with perfect seed in this part of the country.

Mr. Henry Schroeder presented specimens of the large Spanish Chestnut. The seed was introduced by Mr. La Roi from France; to this gentleman Maryland is indebted for many of her fine fruits and flowers.

Mrs. Emory exhibited a specimen of Egyptian Corn, raised from seed sent home by Mr. Mendes I. Cohen, direct from Egypt.

Mrs. Geo.H.Keerl exhibited the following Dahlias, viz: Squibs pure yellow, Lord John Russell, Purple Globe, Don Pedro, &c.

Mr. Samuel Feast exhibited the following Dahlias, viz: Levick's Incomparable, (two specimens, one deep crimson, the other crimson tipt with white—the most perfectly variegated Dahlia known,) Dunlap's Royal Purple, Squib's pure yellow, Roi des Rouge, and Gen. Marion, a fine crimson velvet.

EXPORT OF WOOL.—There have been some shipments of the finest American wool, both from this port and Philadelphia, for England and France. It is thought that a profit will be realized upon the shipment.—*N. Y. Jour. Com.*

THE FARMER.

From the (Edinburg) Quarterly Journal of Agriculture

On providing schools for the instruction of farmers' sons in the physical sciences.—By William Hawkins.—(Concluded from page 195.)

ACCOUNTS.

In a business embracing so many particulars as farming, it is essential to be able to distinguish the profit and loss upon each. Nothing is more easy or more common than for a man who keeps no accounts, to continue for a series of years, to lose money upon some particular department without knowing it, or, which is almost as bad, to employ his time and capital in less profitable speculations, when he might have applied them to such as were more so. A farmer grows many sorts of crops, and keeps several species of animals—breeding some and buying others, and uses many kinds of manure. Assuming that he has a general profit of 10 per cent at the year's end, how is he to tell whether all the branches of his business have contributed rateably to this result—how, I say, is he to tell this without accounts? The cost of one acre of corn, for example, is by no means self-evident; it is "compounded of many simples, extracted from many objects,"—rent, tithe, taxes, seed and tillage—horses' keep and man's keep—rates for the poor—the church and the highways, and so with every other crop. Suppose now, that in the case of oats, all the items of expenditure accurately set down, shall amount to 5*l.* 15*s.* annually, and that the crop shall sell for 5*l.* 10*s.* Upon forty acres, here would be a loss of 10*l.* a year; but without setting down the several items which compose the cost, and adding them together, how is a man to tell within 5*s.* what his acre of oats cost him? He may know that his acre cost him *about* 5 or 6*l.*, but in this very *about* is the *essence* of the mischief. About 5*l.* or 6*l.* may mean either 5*l.* or 6*l.*; now if the selling price were 5*l.* 10*s.*, the former supposition would give a profit, and the latter a loss, of 20*l.* a year; and thus any man may, and multitudes do, continue to the end of their lives carrying on branches of business by which they lose money unconsciously. The observations apply to manures brought on a farm. Price, carriage, labor, &c. all reckoned, bonedust may be 5*s.* an acre dearer or cheaper than stable dung,—but without counting up the cost of each item that forms the price, a man may be ignorant of this difference, and he may lose 5*s.* on an acre. It is by a few shillings gained here and saved there, that a farmer makes his profit. It is no exaggerated estimate to suppose, that these petty items may often make a difference of 10 per cent. at the year's end, and that so, one man may make a living on the same farm, where another would fail. A knowledge of these details therefore is useful, and is to be acquired by a system of accounts.—Nearly allied to, if not identical with accounts, is a facility at all the common operations of arithmetic, and the storing in the mind of certain arithmetical results, which may serve as the basis of future calculations. The multiplication table is a familiar example of the vast importance of this prepared and portable knowledge. The commonest operations of arithmetic could scarcely be carried on without the intuitive readiness with which the product of any two of the numbers under twelve have been made to occur to the mind; but the principle is capable of an application much wider than it has received. The proportions existing between the numerical parts into which the year, the acre, the pound sterling, and the ton weight are divided, might be impressed on the mind, and, as it were, *burnt in* by continual repetition; as, for example, the weight of an acre of turnips, is a fact which it is desirable to know, and which is ascertained in five minutes, if we bear in mind, that, for every pound on the square yard, there are 2 tons 3 cwt. 24lbs. on the acre; and we should, in a similar manner, be able to tell without effort, what breadth of turnips would keep a sheep or a cow for a year. The number of inches in a square or cubic yard, and of yards in an acre, the number of pounds in a ton, and the proportion existing between the days in the year, and the common subdivisions of our measures of weight, capacity, superfices and value, suggest themselves as instances. A number of these facts and relations being well impressed on the recollection of boys at school, they would come in after-life to the calculations necessary to establish knowledge, instead of guesses respecting the affairs of their farms, so well prepared as to make that occur intuitively and without labor, which men, not so prepared, could only come at with much labor, or perhaps not at all. There is scarcely any thing easier than the use of logarithms, but we are certainly not all qualified to have invented them.

There still remains other sciences from which instances as frequent might be drawn. Vegetable Physiology, Meteorology, Geology, Hydrostatics; but it is not by the endless multiplication of instances that attention can be enchained or conviction adduced, but a sample is intended not a catalogue. A nosegay may give some idea of the riches of the parterre, and has the advantage of being more portable.

But besides enriching the mind with a store of knowledge positively and actually useful, a course of education such as I have suggested, would, by the inculcation of sound principles, defend the mind from the inroads of many senseless prejudices; for the ignorant are, as has been before hinted, the most inveterate theorists. They will never be satisfied without assigning some cause for the phenomena which they see, and that assigned cause is often not only false, but absurd; and, as the remedies resorted to are mutually correspondent with the supposed cause of disease, the latter is likely to remain undisturbed, and a new disease to be introduced by the operation of the intended remedy. Apple trees have been cut down, from its having been unjustly supposed that they bred certain insects which did mischief to the corn. Kirby and Spence give an instance of a meadow in which the grass was eaten up by grubs; the rooks were busy in digging for these grubs, of which they happened to be fond, but the owner thought it was the rooks that eat the grass, and he therefore shot them. It is not stated whether he also killed his cat to preserve his cheese from the mice. Bradley, an agriculturalist famous in his day, accounted for the blight in the following original manner: He supposed it to be occasioned by insects which came from Nova Zombla, "*where the cold is intense enough to give life to these small creatures.*" The late Mr. Bakewell theorized himself into thinking, that dung should be dried into the fineness of a pinch of snuff,—"an opinion," says the author of the New Farmers' Calendar, "which I have ever thought absurd and unprofitable in the extreme," and I believe most people will think so too; but even the author of that Calendar is guilty of the following heresy:—He says "It would be wonderful did we not know of the constant recurrence of such contrarieties in agricultural practice, that lime has been often found of the utmost advantage and perfectly noxious by different cultivators, on soils of *a perfectly similar nature*," which I think "may hardly be, Master Shallow."

A scientific education would, moreover remove the great gulph which appears to separate every part of the country from every other part; things may be known and done for ages in one place, without their being heard of in another not a hundred miles off. Potatoes were brought into Ireland about 1610, and did not arrive in Cantire, which is a very sandy soil, and where they have since succeeded so well, in less than a century and a half. They had reached Lancashire forty years before they were much planted about London, and then considered as rarities, without any conception of the utility that might arise from bringing them into common use. The cultivation of the turnip was introduced about 1670, but at first it seems to have been overlooked and even neglected for many years, and then again proposed, recommended, and explained with better success.

To put the argument into a different form, let us advert to the introduction of Swedish turnips. Less than 35 years ago, the author of the New Farmers' Calendar was obliged to quote an account of them from the Nottinghamshire Report, "being without experience in the culture of this root." And in another place he says, "I hear his Grace, the Duke of Bedford, has from 20 to 30 acres of the Ruta Baga at Woburn." Now, if this crop had made its way no faster than potatoes, it would not have been heard of over a quarter of the kingdom yet, and there are many farms to whose improved system of husbandry they are essential. It is stated in the history of the Royal Society, that the value of sea-shells as a manure had been known in Cornwall at least as early as 1675, and the process followed had been published in the transactions of the Royal Society; and yet, in 1744, the use of them was so little understood in Suffolk, that a farmer who found it out by accident, soon realized a fortune by the discovery.

It has already been hinted that the instruction here proposed could be given only at school.—Grown men scarcely ever have resolution enough to carry them through the fatigue of studying fresh sciences. Either distinct schools might be established, or the existing schools might be modified. An intelligent farmer, who is already in the habit of taking pupils, might be provided with a scientific tutor. In the morning the boys might employ themselves as they do now, in personally observing and assisting in the affairs of the farm; and in the evening they would receive from their tutor instruction in Chemistry, Botany, the structure

and diseases of cattle, the knowledge of insects and of the weather, natural philosophy and book-keeping. I suppose a couple of years well employed would be sufficient to give a young man a competent knowledge of these matters. A difficulty might present itself in the first instance, in finding tutors properly qualified; but that would be at the beginning only, for the pupils of this year would be the tutors of the next, and so a perpetual succession would be provided. People are sly of new things; but a father in choosing a school for his son would naturally say, (if the charge was not increased,) whether these things be of any use or not, we shall get them for nothing; the boys will receive the usual instruction *and this besides*, be it worth little or much; and, therefore, by all means let us have it.

The only means by which there is any hope for accomplishing these purposes is, the formation of a comprehensive Agricultural Society; and it is a little surprising, that among the innumerable societies now existing in London, there is none specially dedicated to the improvement of Agriculture. There are many provincial farming societies, probably all useful more or less; but there are important purposes which they are not qualified to effect. Therefore, I propose the formation of a central society, to be established in London, for the improvement of the agriculture of the kingdom, which might be called the "British Society of Agriculture," with the following objects:

To provide a suitable building, or rooms, for holding a library, museum, &c.

To hold meetings once a fortnight, at certain seasons of the year.

To procure from the most eminent scientific men of the day, lectures on the application of the various sciences to agriculture, which might afterwards be printed.

To correspond with foreign societies, and to form a centre of communication for those established in this country.

To take in all the periodical and other scientific works applicable to agriculture, published in any part of the world, and to print and circulate, in a cheap form, monthly digests of whatever useful matter they might contain.

But, principally, to establish throughout the kingdom, schools for the instruction of farmers' sons in the elements of the Physical Sciences.

[From the New York Farmer and American Gardener's Magazine.]

VEGECULTURAL ECONOMY.—*Corn, Cassave, and Bananas.* By H. PERRINE.

MR. FLEET.—You have said that in the United States we have not yet learned the immensely productive power of one perfectly cultivated acre.

I reply, that I hope the time will never arrive when the American cultivator shall be under the necessity of extracting the greatest possible produce of any single vegetable from the least possible ground, with a greater proportionate share of capital or labor. The great object of American Vegeculture is to obtain the greatest value for the least labor and capital, and the consequent great happiness of our agricultural labors is the relatively high price of their industry, which I devoutly desire may never be diminished by imported systems of European agriculture. The dearness of ground, and the cheapness of labor, combine to make the European landlord desirous of obtaining the greatest possible number of roots or of grains from the least possible number of perches or of acres; while the cheapness of land, and the dearness of labor, combine to render the American farmer desirous of obtaining the greatest number of roots or of grains with the least possible number of laborers or of dollars. Nevertheless, *an economy of surface* may, in many instances, be profitably observed by even the American laboring landlords. His orchard of apple or cherry trees *is* also his meadow or his corn-field, and *may be* also at the same moment his vineyard, or his hop plantation. His hop or his grape vines may be so trained as to augment instead of diminish the quantity and quality of the fruit on the trees which sustain them; and the ground cultivated in maize between them, may have its intervals covered with beans, pumpkins, &c., with a diminution instead of an increase of the labor requisite to eradicate the gramineous weeds which detract nourishment from the kindred corn. Even the indolent Indians of the torrid zone have discovered that many alimentary roots and fruits of *different natural families* of vegetables may be obtained from the same field at the same time, without impediment to the growth of each other, and with the advantage of occupying the place of the otherwise natural and noxious weeds. Thus the *Euphorbiaceous* Jatropha Manchot being planted, (by simply inserting obliquely short pieces of the stem,) when the *external bud* has shot up 8 or 10 inches into the *air*, the *interred buds* having then begun to branch under ground into cassave roots, the *gramineous* zeamays is next deposited in alternate *holes*, not *hills;* and then between both the cassave and the corn are sown the *seeds* of the *cucurbitaceous* melons, watermelons, pumpkins, squashes, and cucumbers; of the *leguminous* phaseolus vulgaris, and other *beans* valued, as with us, for the esculent contents of the pods,—besides those of the *jicamas*, whose principal value resides in their *roots*, (like those of our Phaseolus or Apros tuberosa,) of which there are three kinds, and one at least supposed to be a Dolichos bulbosa; and moreover, the roots of the *convolvulaceous* sweet potatoe, and of the *dioscoreus* yam. As they all contribute to form a refreshing shade for the soil, in the whole surface not occupied by the stalks of the cassave plant and of the Indian corn, and at the same time impede the growth of spontaneous weeds, we have thus demonstrated to us, by ages of experience, among the most indolent and ignorant people of the world, a most important practical lesson of American vegecultural economy—*the greatest production with the least toil.*

H. PERRINE.

AMERICAN EDUCATION.—We copy the following from the Baltimore American, as containing what we deem sound views on education for American young gentlemen. No class of our citizens have a more direct or important interest in a right understanding of this subject, than the farmers of our land.

A question which it seems to us involves the whole subject of what is called a *classical* education, is this—Is the process of instruction in the ancient languages the best means of attaining the end sought? Supposing a youth at the completion of his academic course to be proficient in Greek and Latin—has the best been done that could be done for him by artificial aid to enable him to approach, as nearly as his natural powers will admit of, to the excellence of Sophocles and Thucydides, Cicero and Tacitus as writers and thinkers? Without other investigation, we give to this question a pointed negative merely from referring to the history of these great models themselves. The course of instruction which led them to such towering eminence was directly the reverse of that pursued by their modern worshippers.—Let us then, instead of studying their words, imitate the process which put them in a condition to utter them. Thus we should be their worthy pupils. These great men became what they were, by applying their faculties to things and events around them. Their source of reflection were present deeds—not past histories: their inlets to others' thoughts were their ears, attentive to living speech—not their eyes intent upon dead languages. We, too, to be sure, are under the influence of the present in the same degee that the ancients were, and hear as much of our own language; but the present, and our mother tongue are not made the subjects of systematic instruction—the material with which and through which the young mind is disciplined and developed; and thence we lose the aid of the only firm fulcrum for the mighty lever of education.

We object not to the study of Greek and Latin—far from it. But let them be studied in their natural order, and by those only who can benefit by the study—that is, by those who, in common with all, having received fundamental tuition in present institutions and events and in their native tongue, discover the capacity and disposition to follow the minds of the great masters in other literatures, and to enrich and polish through them their natural resources. In this way, they will learn far more, even of ancient literature, than by the present defective and perverted system; and the money and labor and precious time of others, who have no talent for learning languages, or no qualities to imbibe the spirit of classical works, will not be thrown away as it now is utterly, but be profitably employed.

A singular accident occurred not long since to a bullock, the property of a gentleman residing near Shrewsbury. The animal was feeding on the top of a small mound of earth, on which some trees were growing, when, feeling inclined to browse on the lichen which encircled the tree, he contrived to get his head between two of the branches. Suddenly the earth under his feet gave away, his horns were caught in the fork of the tree, and, when he was discovered, he was found to have expired in this extraordinary manner, having in his struggles dispersed the earth from under his feet, and was hanging in the air outstretched and lifeless.

Be not too brief in conversation, lest you be not understood; nor too diffuse, lest you be troublesome.

No man is free who does not command himself.

THE BREEDER & MANAGER.

[From Dixon's Live Stock and Cattle Manager.]

HEREFORDSHIRE.

It has been conceived, that the Herefordshire variety, which at present is a mixed breed, was originally of the Devonshire sort; and that "its great size is probably derived from an intercopulation with the heaviest of the Welch or Shropshire breeds."

The characteristics of this variety are, the countenance pleasant, cheerful, and open; the forehead broad; eye full and lively; horns bright, taper, and spreading; head small; chop lean; neck long and tapering; chest deep; bosom broad, and projecting forward; shoulder bone thin, flat, no way protuberant in bone, but full and mellow in flesh; chest full; loin broad; hips standing wide and level with the spine; quarters long and wide at the neck; rump even with the general level of the back, not drooping, nor standing out and sharp above the quarters; tail slender and neatly haired; barrel round and roomy, the carcase throughout deep and well spread; ribs broad, standing close and flat on the outer surface, forming a smooth even barrel, the hindmost large and of full length; round bone, small, snug, not prominent; thigh clean and regularly tapering; legs upright and short; bone below the knee and hough, small; feet of middle size; cod and twist round and full; flank large; flesh every where mellow, soft, yielding pleasantly to the touch, especially on the chine, the shoulder, and the ribs; hide mellow, supple, of a middle thickness, and loose on the nache and huckle; coat neatly haired, bright, and silky, color a middle red, and a bald face.

It is equal if not superior to the Devon and Sussex kind, in disposition for breeding or fattening, and in fitness for working is by no means inferior to either of them. The beasts are larger and more weighty, though equally complete in their shape or make, mostly more wide and full over their shoulders or chines, as well as breasts or briskets, and likewise in the hind parts of the rumps.

In the true sort of this variety, no projecting bone in the point of the shoulder is met with, which, in some others, forms almost a shelf, against which the collar rests; but, on the contrary, the shoulder tapers off; there is a great breadth before, and the hind quarters are equally weighty; the tail is not set up high; there is a great distance from the point of the rump to the hip-bone; the twist full, broad, and soft; the thigh of the fore legs, to the pastern joint, tapering and full, but thin below the joint, the horn shoots sideways a little, and then turns up thin and tapering; feeling very well; mellow on the rump, ribs, and hip-bone: quality of the meat not hard, but fine as well as fat; little coarse flesh about them; and a great disposition to marble with fat. Experiment has shown that the favorable disposition to take on fat in these large cattle is such, that they will become fat sooner than either of the other two sorts. Some think this variety of cattle are better formed for fattening than working; that they are large boned, thick legged, quite unlike the above sorts, and, consequently, that they are slower in their motions; but the trials that have been made of these beasts in the same teams, in ploughing and carting, with many of each of the other sorts, have fully proved the superiority of this variety; though on the average, they are found to outweigh the latter of the above sorts. In common, the cattle of this variety are more complete in their form, their several parts brought up more to a level, and the intervening spaces are more perfectly filled than in the other sorts. A middle sized ox of such a shape, free from any sort of hardness of flesh, with legs devoid of gumminess, from knee to hock downwards, and with clean bone and sinew, will, it is supposed, be the fittest for work, and the most generally saleable in the fat state.

The Herefordshire, as well as North Devon, varieties of this breed are a very superior sort of stock, both for the purpose of labor and for that of grazing, being not only clean, strong, and well made, but affording quick proof under the feeding system. The females in the Herefordshire sort have been found to fatten better than any other kind at three years old, except the spayed heifers of Norfolk. The oxen, when six years old, and fattened, will in general weigh from 60 to 100 stones, of fourteen pounds, the fore quarters being generally the heaviest. Being steady and active, as well as capable of great exertion in harness, they are peculiarly adapted to the purposes of the team: they may be worked from three to five or six years old before they are fattened.

It has been remarked, that of late years considerable coarseness of bone has distinguished even the best Hereford cattle; a circumstance which is of trifling importance, as they have proved themselves of such superior excellence that no possible cross could in any way improve them.—Breeders of this variety should reflect on the importance of preserving the old blood in a state of as great purity as possible, as they possess the most valuable breed of cattle in the kingdom for some purposes, and have hitherto been very judicious and fortunate in nicely blending the elements of such a variety; but they ought not to forget that by further mingling and crossing with inferior stock, they may, by degrees, recede from the great eminence they have attained. Should, however, a cross become really necessary, from too much coarseness or over-size, the Devonshire or Norman bulls in such cases are to be selected.

The distinguishing qualities of Herefordshire oxen are the great produce of beef, quick feeding in proportion to their growth and size, and the union of strength and speed in labor. With respect to the most profitable return in quantity of beef, it may be presumed, no breed in England can stand in competition with this, and they have been accordingly the most successful at the annual prize shows. They also command the first price alive or dead.

Though the short horns are of larger size, they do not commonly feed so quickly as the Herefordshire sort, which vary very conveniently as to size, but require to be well kept. They are most powerful draught oxen, being speedy enough for any work, either in the plough or cart, and generally walk sufficiently quick. They are docile and tractable, and if trained with temper and kindness, will drive to an inch with reins: but "as milkers, they have nothing particular to boast."

This is a sort of neat cattle which partakes much of the mixed nature of the middle, long, and short-horned kinds; but in which the horns are generally wider, and do not rise upwards so much as in the Devonshire and Sussex cattle. They have, for the most part, white faces, and throats, with some white on other parts, but their prevailing color is chiefly a dark red or brown, there being few of any other color. Their appearance denotes strength and utility, but is not remarkably showy. In the hide there is a sort of medium between the thick and thin kinds. They take stall feeding better than those with thick hides, but not equal to those with thin ones. They succeed better in moist situations and exposures than the latter, but not so well as the former. From their properties and size, they require rich and good keep.

They have a good form for labor of the more heavy kind, but have less activity than the Devons, and perhaps some other sorts. They are short in the leg, and somewhat so in the length of the whole body; and have more bone than some finer sorts. They have a weighty, fine-grained, well-marbled flesh, and a greater regularity in the mixed proportions of fat and lean than is the case in some other sorts; the chine is somewhat raised near the shoulders, but with sufficient breadth, which causes it to be thick and heavy. They are round in the hucks, with good width from each other, and sufficiently laid over with fat. The rump part has a good form, and the thigh is properly heavy. When killed at an advanced age, however, they die patchy in their fat.

The cows are not valuable as milkers in any great degree, being rarely found in use for that purpose; but the oxen are well suited to and in high estimation for the grazier; the breed may therefore be considered greatly useful.

The oxen appear to be in perfection at about five years old.

This sort of cattle are larger than any other kind, with the exception of the Yorkshire short-horns.

The largest kind are of the weight of from about 980 to 1400 lbs.

The cows, from about 700 to 980 lbs.

It has been imagined that "that the old Gloucestershire reds and browns were middle-horned, showing blood, and resembling, in a great degree, the South Devons, but of a more square and substantial form. They are supposed to have been a mixed breed which showed much Welch blood, and were, it may be presumed, more apt to fatten than milk, since they have given way to the long-horned sort in that dairy country. It would be difficult 'now' to find any genuine specimens of this variety."

The Kentish Homebreds, which are raised from dairy heifers, are also, considered to be, of a mixed breed, the Sussex generally forming the base, crossed with other proper sorts. It is noticed that a variety is thus raised of excellent butter cows, of a small size; and it is suggested to the breeders of that district, whether it may not be worth while to establish and render the breed permanent.

We must not contradict, but instruct him that contradicts us; for a madman is not cured by another running mad also.

MILCH COWS.

In answer to queries put by the Agricultural Society of Lower Canada to Sir John Sinclair.

Cows sprung from the same parents, and reared and fed together, will often vary considerable in the quantity of milk they yield.—Cows give less milk when young, or when they are too old, than they do from four to eight years of their age. Cows that are lean give less milk, and that of an inferior quality, than the same cows will give when they are in good habit of body. Cows generally give more milk for two or three months after calving than they do afterwards.

The quantity of butter yielded by cows, depends more on the food given them, than on any particularity of the breed of cattle; and the quality of the butter is greatly influenced by the mode of feeding, and still more by the manner in which the butter is manufactured. Cows that browze on natural pasture, or what is called old turf, do not yield so much milk as the same cows would give when fed on clover, turnips, cabbages, and new herbage, but the milk of the former is of better quality, and yields more and richer butter, from any given quantity of milk, than that of cows fed on clover, &c. Some individual cows of every breed give richer milk, and of course more butter in proportion to their milk, than other cows of the same breed, and when reared and fed in the same manner. Milk, as it comes from the cows, consists of oily matter, from which butter is made, *lactic* matter, which forms cheese, and *serum* or whey; and the milk of particular cows of every breed differs considerably in the proportions it contains of these respective substances. But it is doubtful if any particular breed can be pointed out, which uniformly yield more butter than any of the other breeds, except in so far as they yield more milk, or are influenced by climate, the mode of feeding, &c. Much butter, and that of a superior quality, is made in Holland, and particularly in the Province of Freiseland. This seems to proceed from the cattle being fed on meadows where the herbage is of natural growth, and very rich. The cows of Holland give less milk in proportion to their size, than the generality of the Scotch dairy cows; but the milk of the Dutch cows is richer than the other. In Holland the milk is not allowed to stand more than 18 to 24 hours, to cast up cream, while in Scotland it stands double those periods. The consequence is, that nothing but the richest and best cream, which always rises first, is made into butter in Holland; while in Scotland, the inferior cream, which makes inferior butter, is collected and churned with the other. And, above all things, the great attention paid to cleanliness in Holland has a powerful effect upon the quality in their butter.

A cow, kept by Wm. Cramp of Lewis, in the county of Sussex, is mentioned in the fifth and sixth volumes of the communications to the Board of Agriculture, as having yielded, in the year 1805, 540 pounds of butter, in 1807 she gave 675 pounds, and in 1808 the same cow gave 466 pounds, avoirdupois of butter. The Secretary to the Board of Agriculture mentioned a cow kept by the Rev. Mr. Hackett, of Beckingham, near Newark, that yielded nineteen pounds, avoirdupois, of butter in one week. But he added, that six, seven, or eight pounds per week, were the common returns of the cows in that part of England.

Quebec Mercury.

ON HARNESSING DRAUGHT HORSES.

[From "Bubbles from the Brumens [Medical Springs] of Nassau.]

* * * * Many years have elapsed, since I first observed that, somehow or other, the horses on the continent manage to pull a heavy carriage up a steep hill, or even along a dead level, with greater ease to themselves than our English horses. If any unprejudiced person would only attentively remark with what little apparent fatigue three small, ill-conditioned horses will draw, not only his own carriage, but very often that huge, overgrown vehicle the French *Diligence*, or the German *Eil-wagen*, I think he would agree with me; but the whole equipment is so unsightly—the rope harness is so rude—the horses without blinkers look so wild—there is so much bluster and noise in the postillion—that, far from paying any compliment to the turn-out, one is very much disposed at once to condemn the whole thing, and, not caring a straw whether such horses be fatigued or not, to make no other remark than that, in England, one should have travelled at nearly twice the rate with one tenth of the noise. But neither the rate nor the noise is the point—our superiority in the former and our inferiority in the latter cannot be doubted. The thing to account for, is, how such small weak horses, do actually manage to draw a heavy carriage up hill with so much ease to themselves. Now, in English, French, and German harness, there exists, as it were, three degrees of comparison as to the manner in which the head of the horse is treated; for, in England, it is elevated or borne up, by what is called the bearing-rein—in France, it is left as nature placed it (there being to common French harness no bearing-rein)—and in Germany, the head is tied down to the lower extremity of the collar, or else the collar is so made that the animal is by it deprived of the power of raising his head. Now passing over, for a moment, the French method, which is in fact, the state of nature, let us for a moment consider which is better—to bear a horse's head *up* or to pull it *downwards*, as in Germany.

"In a state of nature, the wild horse, as every body knows, has two distinct gaits, or attitudes. If a man, or any still wilder beast, come suddenly upon him, up goes his head; and as he first stalks and then trots gently away—with ears erect, snorting with his nose, and proudly snuffing up the air, as if exulting in his freedom—as one fore leg darts before the other. We have before us a picture of doubt, astonishment, and hesitation, all of which feelings seem to rein him like a troop-horse, on his haunches; but attempt to pursue him, and the moment he defies you—the moment, determining to escape, he shakes his head, and lays himself to his work—how completely does he alter his attitude!—That instant down goes his head, and from his ears to the tip of his tail there is in his vertebæ an undulating action which seems to propel him, which works him along, and which, it is evident, you could not deprive him of without materially diminishing his speed. Now, in harness, the horse has naturally the same two gaits or attitudes, and it is quite true that he can start away with a carriage either in the one or the other; but the means by which he succeeds in this effort, the physical powers which he calls into action, are essentially different; in the one case he works by his muscles, and in the other by his own dead, or rather living, weight. In order to grind corn, if any man were to erect a steam engine over a fine strong running stream, we should all say to him, "Why do you not allow your wheel to be turned by cold water instead of hot? Why do you not avail yourself of the *weight* of the water, instead of expending your capital in converting it into the power of steam? In short, why do you not use the simple resource which nature has presented ready made to your hand?" In the same way, the German might say to us, "We acknowledge a horse can drag a carriage by the power of his muscles, but why do you not allow him to drag it by his weight?"

Let any one observe a pair of English post-horses dragging a heavy weight up a hill, and he will at once see that the poor creatures are working by their muscles, and that it is by sheer strength that the resistance is overcome; but how can it be otherwise?—their heads are higher than nature intended them to be even in *walking* in a state of liberty, carrying no weight but themselves; the balance of their bodies is, therefore, absolutely turned *against*, instead of leaning in favor of, their draught; and if my reader will but pass his hands down the back sinews of our stage-coach or post-chaise horses, he will soon feel (though not so keenly as they do) what is the cruel and fatal consequence. It is true, that, in ascending a very steep hill, an English postillion will occasionally unhook his bearing-reins; but the jaded creatures, trained for years to work in a false attitude, cannot in one moment get themselves into the scientific position which the German horses are habitually encouraged to adopt. Besides this, we are so sharp with our horses—we keep them so constantly on the *qui vive*, or, as we term it, in hand, that we are always driving them from the use of their weight to the application of their sinews.—That the figure and attitude of a horse working by his sinews are infinitely prouder than when he is working by his weight—(there may exist, however, false pride among horses as well as men)—I most readily admit; and, therefore, for carriages of luxury, where the weight bears little proportion to the power of the noble animals employed, I acknowledge that the sinews are more than sufficient; but to bear up the head of a poor horse at plough, or any other slow heavy work, is, I conceive, a barbarous error, which ought not to be persisted in.

MANNER OF SHOEING HORSES IN GERMANY.

[From the same.]

In passing the shop of a blacksmith, who lived opposite to the Goldene Kette, the manner in which he tackled and shod a vicious horse always amused me. On the outside wall of the house, two rings were firmly fixed; to one of which the head of the patient was lashed close to the ground; the hind foot to be shod, stretched out to the utmost extent of the leg, was then secured to the other ring about five feet high, by a cord which

passed through a cloven hitch, fixed to the root of the poor creature's tail.

The hind foot was consequently very much higher than the head; indeed it was so exalted, and pulled so heavily at the tail, that the animal seemed to be quite anxious to keep his other foot on *terra firma*. With one hoof in the heavens, it did not suit him to kick; with his nose pointed to the infernal regions he could not conveniently rear, and as the devil himself was apparently pulling his tail, the horse at last gave up the point, and quietly submitted to be shod.

THE GARDENER.

[From the Florist's Manual.]

CULTIVATION OF FLOWERS WITH BULBOUS ROOTS.—Bulbous roots should, in general, be placed in a light, rich soil, mixed with a tolerable proportion of sea-sand. The compost commonly used is one-third fine sand, one-sixth rich loam, one-third stable manure, and one-sixth leaves of trees. The two last named articles are to be well rotted, and at least two years old; the beds should be formed two feet deep, being raised four or six inches above the garden, to turn off the rain; the best time for planting bulbs is in October or November, though it will do if delayed until the first of December.

The distance at which Hyancinths should be placed from each other is about six inches; the bulb should be placed in fine sea-sand, and covered with it; after they are thus planted, the bed should be carefully covered with earth four inches in depth; when winter sets in, or about the middle of December, cover these beds with straw, sea-weed or leaves four or five inches deep; a part of this ought to be removed, however, about the middle of February, and the remainder during the month of March—If there be too much protection the bulbs will be injured.

When these plants blossom, their bells may be supported by small sticks; they should be protected from heavy rains and an intense vertical sun—When the blossoms are faded and the flowering season is over, the flower-stems should be cut off; the buds snould be left, until the leaves are nearly dry, when the bulbs are to be taken up and the leaves cut off, half an inch from the top of the bulb—they are then replaced (sideways) with the fibres on in the earth, and again covered with it; they should there be allowed to remain and gradually dry for a month, and then be taken up, cleared from the earth and fibres, and each bulb wrapped in a sepaarte paper, and kept dry, or packed in dry sand.

Should the flowers be desired to decorate the parlour in the winter, they ought to be planted in September; they should be placed in deep, narrow pots, six inches in diameter at the top, and about one-third deeper than common flower-pots; the bulb should be just covered with the kind of soil before described; the watering should be from the top, but the pots may be allowed, twice a week, to stand in saucers filled with soft water; they ought to have as much sun and air as possible—they should never, however, be allowed to feel the direct influence of fire; when the plants begin to blossom, the earth may be kept constantly saturated with moisture; the bulbs may be preserved, when they have done blossoming, as before directed.

The Single Hyacinth is generally preferable to the double, for early flowering; many of them, are two or three weeks sooner in bloom—their flowers are more numerous and brilliant than those of the double.

Tulips are hardier than Hyacinths; they are generally planted three or four inches apart, and covered with earth two or three inches deep.

The Polyanthus Narcissus, is among the most delicate and tender of bulbs; these bulbs should be very carefully protected from the frost; they may be planted six or eight inches deep, and about eight inches apart from each other; they ought to be taken up soon after blossoming, otherwise they are liable to suffer during the winter.

The Ranunculus, Anemone, Oxalis, and Dogstooth Violet, should be planted at the depth of one inch; the bulbous Iris, Crocus, Arum, Small Fritillaria, Tiger-flower, Gladiolus, and Snowdrop, two inches—Tulip, double Narcissus, Jonquil, Colchicum, and Snow-flake, three inches; Hyacinth, Amaryllis, Martagon, and other large Lilies, and Pæonies, four inches; the Crown Imperial, and Polyanthus Narcissus, five inches.

In making the estimate of these depths, admeasurement should always be taken from the top of the bulb; the rows should be eight or ten inches apart, and the roots about six or seven distant from each other, varying with the size of the flower; the bulbous roots most frequently selected for parlour flowers, in winter, are the Roman Narcissus, double Jonquille, Polyanthus, Narcissus, double Narcissus, Crocus, and single Hyacinths; some of the earliest double Hyacinths are however sometimes selected, although they blossom some time later than the single.

Hyacinths intended for winter, should be placed in glasses about the middle of November; the glasses should be previously filled with pure water; the bottom of the bulb, when placed in the glass, may just touch the water; when thus situated, they are to be placed, for the first ten days, in a dark room, to promote the shooting of tfie roots; they then must be exposed to the light and sun as much as possible; although they will blossom without the influence of the sun, the colours of the flowers will be greatly inferior, should they bloom in the shade.

The water, when it becomes impure, should be changed. The roots should be taken from the glasses, and their fibres rinsed in clean water, and the glasses well washed inside. Great care must be taken that the water in the glasses be not allowed to freeze, as it bursts the glasses and bestroys the roots. Soft, clear rain water is preferable for such roots. Other pure water will, however, answer.

Nosegays when they have been kept for a considerable time, may often be, in a degree, restored in this way, by a change of the water in the glasses, in which their ends are inserted. They are benefitted by this change on the same principle as bulbous roots. Flowers almost dry, may sometimes be temporarily restored, by covering them with a glass bell or cup, or substituting warm water instead of cold.

The only advantage gained by taking up bulbs after blooming, (Tulips excepted) is, either to divide the roots, when too numerous, or to renew a worn-out soil. Nither of these can occur oftener than once in three or four years.

Bulbs are subterranean organs somewhat analogous to buds. They usually have numerous fibres or radicles attached to their inferior surfaces. Though they do not in all respects seem to belong to roots, they are usually regarded, and described as such.

Three varieties are commonly enumerated. 1st. The *scaly* bulb, as that of the Lily. 2d. The *tunicated* or *coated*, as that of the Onion. 3d. The *solid*, as that of the Crocus or English Saffron.

Bulbs, like buds, enclose the embryo of the future plant, and protect it until the period of its evolution arrives. In this respect they perform the office of buds. Many of them are composed of concentric scales, nearly allied to those of the buds which secure the tender leaves and flowers of northern regions from the rigors of winter, to which they would otherwise be exposed.

They also bear some analogy to the tuberous root, whether we consider them as buds or roots, the plants to which they are attached will always be regarded with peculiar interest, as among the most splendid ornaments of our gardens.

These plants are often among the earliest harbingers of spring, embracing the Snowdrop, Lily, Tulip, Hyacinth, and about 40 other beautifully flowering plants.

We cannot fail to observe, while examining the curious organization of different roots, with what apparent care the plants of another year are protected, and the species secured against the various chances of destruction.

PLANTING FRUIT TREES.

By an experienced writer in the Ohio Farmer.

The tree to be planted should be as young as circumstances will admit. The best season for planting is just when the leaves begin to turn yellow in the fall—the spring will answer if done very early; the ground being prepared and the tree taken up, prune the roots with a sharp knife, so as to leave none over a foot long; and if any have torn off nearer to the stem, prune the part so that no bruises or ragged parts remain, cut off all the fibres close to the roots, for they never live, but mould, and do a material injury; if they be cut off their place is quickly supplied with others; dig the hole twice as big, and one foot deeper, than the roots actually need for room; have fine earth and a very fine rich mould, mixed together; lay some of this one foot deep at the bottom of the hole; place the roots upon this in their natural order, and hold the tree perfectly straight, while you put sifted earth in the roots, move the tree different ways and give it a gentle lift and shake, so that the fine earth may find its way among the smallest roots, filling up the least cavity; every root should be pressed by the earth that is thrown in. When you have covered all the roots with the sifted earth, and have found that the tree is planted just as it originally stood, allowing four inches for it to settle; fill up the rest of the hole with common earth, and when you have nearly filled it, tread lightly on the dirt, then fill the remainder of the hole, leaving the top as light and

smooth as possible; use no water, it sinks rapidly down, makes cavities among the roots, lets in air; the roots will mould and canker, and the tree often die.

If the tree be planted early in October, it will have struck out roots a number of inches long before winter sets in, and this must be the best time for doing the business. They have the fall and winter to become perfectly settled, and in spring they have nothing to do but meet the genial rays of the sun, and to grow. The roots should be out of ground as short a time as possible, and if the roots become partially dry, soak them a few hours in soft water.

If the tree be for an orchard, it should be five or six feet high, unless cattle can be kept out; and each one should be kept steady by a stake, for if they be moved about by the wind, the roots become loose and the tree injured—if the trees be very short they will require no stake. They ought to be planted the second year after budding or grafting. If the tree be planted out in the fall, the head should be shortened down in the spring. If you plant in the spring, do it as early as possible, but the ground must be dry on the top when you plant, and as soon as the buds begin to swell, shorten the head. After a spring planting, guard against the drought, by laying small stones round the tree, to the distance of two feet from the centre. As it respects the distance of planting, this depends upon the different kinds of fruit, as some need more distance than others.

MISCELLANEOUS.

GEOLOGICAL TREAT.

Extract of a letter from a female correspondent of the Portsmouth Journal, at Lowell, Massachusetts.

I have just returned from an excursion which was been an intellectual feast. At the place where the rocks have been dug out for the rail road, there is one eminence, for the distance of a hundred yards, where the ledge is fifty feet deep —and from these rocks are taken some of the finest specimens for the contemplation of the Geologist. Professor SILLIMAN has been lecturing here on this science, and has led the minds of those who are interested very much into this channel.

His theory is, that there are volcanic fires in the centre of the earth which are continually throwing up rocks—that their natural position is horizontal by the grain, but are thrown perpendicular as they are found by this ledge—the veins of different sorts of stone running in that way through this ledge, gives some evidence of the truth of this theory, and presents a scene to the lover of the science of Geology, rich to behold,—which of itself the learned lecturer pronounced as worth all the trouble of a journey from Connecticut. Professor S. took out parties of gentlemen and ladies with him to this place, with their bags and hammers, to collect specimens, and there enforce his arguments.—This rendered his lectures far more interesting than they could have been in any other place. Among the specimens I have collected are Quartz, Feldspar, Mica, or isinglass, with garnets interspersed. Professor S. by his theory very satisfactorily accounts for the formation of the beds of coal which are dug out of the earth.

The light of science is diffusing her beams upon us that we may see more clearly the wonderful works of our Creator, and the wisdom with which he has made them all—and still farther, that he bestows on man the intellectual power whereby he may make three discoveries. Professor Silliman was very much caressed and had many presents while here. One gave him cloth for a suit of clothes—another a twenty dollar hearth-rug,—a third an india-rubber cushion, filled with air—thus, not only treating him with some of the grandest specimens of the works of nature, but with some of the finest works of art.

ON DOMESTIC ECONOMY.

Extract from the Auto-Biography of Sir Egerton Brydges.

"I married at the early age of twenty-two—much too early—without an income adequate to my habits, unless with great economy—and I had no economy. I could not sift bills, cast up accounts, examine prices, and make bargains.—There was, therefore, every kind of mismanagement; and I soon became involved. But I had no personal expenses; I neither cared for dress, nor equipages, nor out door amusements, nor society. If I was left in quiet with my books and my pen, I was content. But quiet was never my destiny. The first involvement multiplies itself at every move. It destroys the freedom of the intellect and the heart; and drives me into a state of mistiness, which seeks extrication by the very means which augment it. It encourages self-delusions for the sake of momentary peace; and, like inebriety, buys oblivion at the expense of quickly succeeding pain and sickness. The creditor, who thinks himself sure of his debt at last, delights in giving credit, because he has his debtor at his mercy, makes his own usurious terms with him, and gorges on his blood. He who lives on credit does not dare examine bills; and the creditor charges according to the degree of his own wide conscience. Thus, there is a difference of at least, cent. per cent. in every article the debtor consumes; and two thousand pounds a year with him, will not go so far as one in the hands of him who pays ready money, and looks to his accounts.

It is true, that there are various causes for excess of expenditure by an individual, besides carelessness. Perhaps vanity, and a false notion of the character of mankind, is the first. A mind not sound is apt to value others according to their station and riches; and as there is a natural passion in mankind to be well estimated, they are thus impelled to put on outward appearances, which may induce the belief that they possess a consideration and wealth which do not belong to them. The mind that cannot purify itself from these vaporous delusions, must be unhappy either way.—If it encounters superior fortune and establishment, while it puts on no appearance beyond its own humbler state, it either feels degraded, servile, and mortified, or is roused into anger and malignity. On the other hand, a false assumption of consequence, by means of an expenditure which cannot be afforded, is followed by a degradation infinitely worse; because, in addition to the intervening pain by which it is supported, the actual inferiority of rank and money becomes lower in a course of time by the struggle. Right thinking, therefore, and dignity of sentiment on these important subjects, which occur every day of our lives, are absolutely necessary to our moral well being.

Neither ostentatious displays, nor luxuries, increase our real enjoyments; and if we cannot afford them, we are relieved from the mortifications they keep off at far too high a price. It is rarely that they do keep off mortification, even for a time; for the world is too sharp-sighted not to detect false pretensions and show which cannot be prudently supported.

Mankind always take the ill-natured side, and confound the expenditure of carelessness and erroneous calculation with the expenditure of vanity. There is nothing, therefore, more unfortunate, from whatever cause it proceeds, than excess of expenditure beyond income. The greater part of the harpies of society live and gorge themselves by taking advantage of this imprudence. Half the population of London live upon it; three-fourths of the ravenous lawyers live upon it; all sorts of agents live upon it; and half the demoralization of society is generated by it."

VORACITY OF RATS.—The Aberdeen Herald relates the following remarkable instance of the grey or Norwegian rat. A farmer in the vicinity of Banff, on going out to look at his pigs, found the young of a sow which had recently littered, with their throats gnawed through and their bodies partly eaten, and some of them dragged into the holes of the rats, nearly a dozen of which ferocious animals were busily engaged in devouring the young pigs.

IMMEDIATE RELIEF OF THE TOOTHACHE.—Dr. Ryan observes, that the application of the pure nitric acid to a carious tooth procures almost immediate relief of toothache and faceache, without producing the slightest pain. The acid must be applied to every part of the decayed surface, and care taken not to suffer it to touch the gum, cheek, lips, or apparel. The mouth should be washed after the application with tepid water. It is much easier to touch the teeth in the lower than the upper jaw; but I have never known a single instance in which the acid was fairly tried and completely applied to the decayed surface, without procuring almost immediate relief, and without any pain. When the upper teeth are diseased, it is very difficult to touch the nerve in a small opening, and this is the cause of failure.—The remedy may be employed, however delicate the patient,—even to children.—*Med. & Surg. Jour.*

Mildness governs more than anger.

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BALTIMORE PRODUCE MARKET.

☞ *These Prices are carefully corrected every* MONDAY.

	PER.	PROM	TO
BRANDY, Apple,	gallon.	$0 36	$—
Peach,	"	75	—
BEANS, white field,	bushel.	—	—
BEEF, on the hoof,	100lbs.	4 00	5 00
CORN, yellow,	bushel.	70	71
White,	"	70	71
COTTON, Virginia,	pound.	12	14
North Carolina,	"	12	14
Upland,	"	14	16
FEATHERS,	pound.	35	38
FLAXSEED,	bushel.	1 37	1 50
FLOUR—Best white wheat family,	barrel.	6 50	7 00
Do. do. baker's	"	5 75	6 25
Do. do. Superfine,	"	5 00	5 25
Super Howard street,	"	5 12	5 25
" " wagon price,	"	5 00	5 18
City Mills, extra,	"	5 00	5 25
Do.	"	4 85	4 87
Susquehanna,	"	5 25	—
Rye,	"	—	—
GRASS SEEDS, red Clover,	bushel.	5 00	5 50
Timothy (herds of the north)	"	3 00	3 50
Orchard,	"	3 00	3 50
Tall meadow Oat,	"	2 25	2 50
Herds, or red top,	"	1 25	—
HAY, in bulk,	ton.	—	17 00
Pressed,	100 lbs	60	65
HEMP, country, dew rotted,	pound.	6	7
" water rotted,	"	7	8
LIME,	bushel.	30	33
MUSTARD SEED, Foreign,	"	4 50	5 00
Domestic,	"	5 00	6 00
OATS,	"	31	35
OIL, linseed,	gallon.	—	92
Castor	"	1 50	1 75
PEAS, red eye,	bushel.	—	—
Black eye,	"	1 00	—
Lady,	"	—	—
PLASTER PARIS, in the stone,	ton.	2 81	2 87
Ground,	barrel.	1 37	—
PALMA CHRISTA BEAN,	bushel.	1 50	—
RAGS,	pound.	3	4
RYE,	bushel.	65	67
TOBACCO, crop, common,	100 lbs	3 75	5 00
" brown and red,	"	5 00	7 00
" fine red,	"	7 00	9 00
" wrappery, suitable for segars,	"	6 00	12 00
" yellow and red,	"	8 00	12 00
" yellow,	"	13 00	17 00
" fine yellow,	"	15 00	25 00
Seconds, as in quality,	"	3 50	5 00
" ground leaf,	"	5 00	9 00
Virginia,	"	4 00	—
Rappahannock,	"	—	—
Kentucky,	"	4 00	9 00
WHEAT, white,	bushel.	1 05	1 12
Red,	"	1 00	1 05
WHISKEY, 1st pf. in bbls	gallon.	32	33
" in hhds	"	62	30½
" wagon price,	"	—	29
WAGON FREIGHTS, to Pittsburgh,	100 lbs	—	1 50
To Wheeling,	"	2 00	1 75
		washed.	*unwash*
WOOL, Prime & Saxon Fleeces,	pound.	50 *to* 60	24 *to* 26
Full Merino,	"	44 50	22 24
Three fourths Merino,	"	37 44	22 24
One half do	"	33 37	21 22
Common & one fourth Meri.	"	30 33	18 20
Pulled,	"	28 31	18 20

BAKEWELL RAMS.

TWO Bakewell Rams of good size and quality, for sale by a farmer near Baltimore at $20 each. Apply to I. I. HITCHCOCK,
oc 28 American Farmer Establishment.

SEVERAL FINE JACKASSES,

FOR sale at prices from $100 to $1000.—GOOD JENNIES are wanted. Enquire of
I. I. HITCHCOCK,
Oct. 7. American Farmer Establishmen.

BALTIMORE PROVISION MARKET.

	PER.	FROM.	TO.
APPLES,	barrel.	$1 50	$2 50
BACON, hams,	pound.	11	—
Shoulders,	"	—	10
Middlings,	"	—	10
BUTTER, printed, in lbs. & half lbs.	"	25	37
Roll,	"	12	20
CIDER,	barrel.	—	—
CALVES, three to six weeks old	each.	4 00	7 00
COWS, new milch,	"	22 00	30 00
Dry,	"	9 00	12 00
CORN MEAL, for family use,	100lbs.	1 62	—
CHOP RYE,	"	1 62	—
EGGS,	dozen.	13	—
FISH, Shad, salted,	barrel.	5 50	6 50
Herrings, salted, No. 1,	"	4 75	—
Mackerel, No. 1, 2 & 3,	"	4 75	6 75
Cod, salted,	cwt.	2 62	3 00
LAMBS, alive,	each.	1 25	2 00
Slaughtered,	quart'r	31	50
LARD,	pound.	8	—
ONIONS,	bushel.	75	—
POULTRY, Fowls,	dozen.	1 75	2 00
Chickens,	"	1 75	2 00
Ducks,	"	2 00	2 25
POTATOES, Irish,	bushel.	40	56
Sweet,	peck.	19	25
VEAL, fore quarters,	pound.	7	—
Hind do.	"	8	—

ADVERTISEMENTS

FARMERS' REPOSITORY,
NO. 36 PRATT STREET,
Between Hanover and Charles street.

THE subscriber has been engaged for the last eighteen months adding improvements to his establishment, and now believes it to be equal in extent and convenience to any other establishment of the kind in the United States, and is prepared to fill any orders in his line on as reasonable terms, taking into consideration the quality of his work. It is his determination to procure the best materials, and to have the workmanship executed in the best possible manner, and to keep a general assortment of such implements of husbandry as give the most general satisfaction to farmers. It may be well here to observe, that there are constantly alterations making in Ploughs and other implements, which are no improvements, and are only calculated to give the purchaser double trouble by increasing his varieties without improvement—but all useful improvements the subscriber will continue to adopt as heretofore. I have on hand a large stock of implements, which I offer to the public, among which is my patent Cylindrical Straw Cutters, of various sizes, and prices.—These machines have been in operation 12 years, during which time I have sold nearly seven hundred of them, and I believe that no machine has ever been introduced that has given more general satisfaction. I have a large stock of Ploughs, of various kinds and sizes, wrought and cast shares, the most approved kinds of Wheat Fans, Corn Shellers, Harrows, Corn and Tobacco Cultivators; Rag Cutters, for Paper mills, Fox & Borland's Patent Threshing Machines, improved by myself, also, one of Z. Booth's Threshing Machines, with stationary horse power; Hay and Manure Forks; Tanner's Forks; Spades and Shovels; Field and Garden Hoes, Grubbing Hoes, Picks and Mattocks, Briar Hooks, Hay Knives, Caststeel Narrow and Broad Axes; common Straw Cutting Knives, &c.; and all kinds of Plough and Machine Castings, to suit Ploughs and Machines, made by me, kept constantly on hand; and all repairs done at short notice.

Also—will be kept constantly on hand, at retail, a general assortment of the Messrs. Landreth's celebrated GARDEN SEEDS—likewise, all kinds of Grass and other Fields Seeds, when they can be obtained of good quality.

A liberal discount will be made on my implements to those who purchase to sell again.
Oct. 28. 2t J. S. EASTMAN.

BULBOUS ROOTS.

HYACINTHS, Tulips and a general assortment of Bulbous Roots, suitable for the present season, for sale low at this establishment by
Oct. 28. I. I. HITCHCOCK.

BLOODED CATTLE.

ONE thorough bred Bull and one Heifer of the improved Durham S H. breed, whose pedigree as well as appearance prove them to be valuable animals, one year old last Spring, may be had for two hundred and fifty dollars, if taken immediately. Also, several Bulls and one Heifer of alloyed blood, for sale *very low*, if immediately applied for at this establishment. oct 28

GRAPE VINES.—The subscriber will receive orders for VINES from Mr. Herbemont's Nursery, till the 15th of November.

For extensive cultivation in this climate there is no grape so valuable as the Herbemont. But little inferior to many esteemed foreign varieties for the table, it is equal to any of them as a Wine grape, and surpasses them in the important qualities of abundant bearing and resistance of frost.

Persons in any part of this State, the District of Columbia, and in some parts of Virginia and Pennsylvania may avail themselves of this agency.—Price in Baltimore for 1000 Vines, $100; for 500, $62 50; for 100 do $15.
Oct. 28 4t. G. FITZHUGH, Jr.

PUPPIES.

SEVERAL YOUNG POINTERS of the very best blood, will be old enough for sale, early in November. Also several young GREY HOUND sluts, from the pair sent from Europe to the president of the U. S., and by him presented to this establishment last fall.

Also one SLUT, one year old, from my grey hound slut, by a very fine imported Pointer. She appears to have the Pointer's nose and the shape and agility of the greyhound—color black. Oct. 7.

LINNÆAN GARDEN AND NURSERIES,
FLUSHING NEAR NEW YORK.

WM. PRINCE & SONS have just published their *New Catalogue with greatly reduced prices*—application therefor must be made *direct to them per mail*. Every Department of the Establishment is in the most perfect condition in regard to the accuracy and superiority of its productions—and strangers are solicited to visit it and judge for themselves. The Fruit Trees are of large size, and in the most vigorous state, suitable for Orchards where prompt bearing is desired. Among these are the fine New Flemish Pears. Ornamental Trees and Flowering Shrubs can be furnished of the largest size, worth treble the price of small ones, as several years are thus saved in embellishment. The collections of Green House Plants, and hardy Flowering plants are particularly rich and interesting. The assortments of Roses and Double Dahlias comprise all the new splendid varieties, and each collection occupies above an acre of ground. Splendid Dahlias will now be supplied at $3, $4½ and $6 per dozen—each roót a distinct named variety selected by us.—Of Bulbous Flower Roots the stock is so greatly increased, that they will be sold at very low rates.

Where a large number of trees, &c. is ordered, a discount will be made, and a credit allowed if so desired. The owners of nurseries and other venders of trees and seeds will be supplied at a liberal discount, and a convenient credit.

The assortment of garden, field and flower seeds, is exceedingly extensive, and forms a complete concentration of the choicest varieties known in Europe, and this country, all of which have been raised under our own inspection, or grown expressly for us, by our European correspondents. Their accuracy and excellence are expressly guaranteed, and *we ask no payment where the seeds do not prove exactly as represented.* Among the field seeds are the following: Perennial Ryegrass, New Italian do., Lucerne, Dutch White Clover, early Angus Oats, English Potatoe Oats, weighing 44 lbs. per bushel, Orchard Grass, tall Oats Grass, Trifolium Incarnatum, or early Crimson Clover, and 100 bushels Taylor's Forty fold Potatoe, also 50 bushels Potatoe Onions.—Venders of seeds, will be supplied at the most moderate rates possible, and at a credit to comport with their convenience.

Orders sent *direct per mail*, will have immediate dispatch, and every invoice emanating from us, has our *printed heading*, and *signature* and *no others are guaranteed*.
oc 21 3t

Printed by SANDS & NEILSON, South East corner of Calvert and Market-streets.

THE FARMER & GARDENER;

AND LIVE-STOCK BREEDER & MANAGER.

CONDUCTED BY I. IRVINE HITCHCOCK, AND ISSUED EVERY TUESDAY FROM THE AMERICAN FARMER ESTABLISHMENT, AT $5 PER ANNUM, IN ADVANCE

No. 27. **BALTIMORE, NOVEMBER 4, 1834.** **Vol. I**

☞THIS publication is the *successor* of the late
AMERICAN FARMER,
(which is discontinued,) and is published at the same office, at five dollars per year, payable in advance.
☞When this is done, 50 cents worth of any kind of seeds on hand will be delivered or sent to the order of the subscriber with his receipt.

American Farmer Establishment.

BALTIMORE: TUESDAY, NOVEMBER 4, 1834.

FARMERS PAY ALL (?)—General Gaines in his letter to the Governor of Georgia on the subject of the Atlantic and Mississippi Rail Road, takes the following sound view of the operations of Commerce in relation to Agriculture. We confess however that we cannot see how the farmer "pays all," or any further than he is a *consumer;* for we hold that the merchant is indeed only a factor assessing and regulating charges between the producer and the consumer of *all commodities* whether of Agriculture or of Manufactures. The Agriculturist is unquestionably *the great* producer, No. 1 of the trio, and could live quite comfortably without the aid of either the mannfacturer or the merchant, while neither of the latter could prosper without the former.

The agriculturists contribute mainly to FEED ALL and for the most part to CLOTHE ALL *the human family who enjoy the blessings of civilization.* No civilized man, woman, or child, of the American Republic, particularly, can enjoy health and comfort for many hours in succession, nor even life itself for many days time, without the aid of some of the products of agriculture. To say that agriculturists are as dependent on non-agriculturists, because the latter buy, and eat, and wear some of the products of agriculture, as the latter are on the former, is almost as absurd as it would be to say that the ever-living purveyor of vital air and pure water is dependent on man, because man necessarily breathes air every instant of his life, and drinks water every day of his life. *The agriculturists, moreover, pay all expense of transportation in their comuerce with all other classes of the human family*—whether carried on in the products of agriculture or in their exchange for foreign merchandize, or the fabrics of domestic manufactures. The merchant is as emphatically the *agent* or *factor* of the agriculturist, as the public representative elected by a people enjoying the privilege of self-government is the agent or servant of that people. The merchant makes no trip to the *great city to which the South and West have long paid a voluntary tribute of as many millions per annum as would construct the proposed Rail Road, a work that would forever put an end to that* HUMILIATING TRIBUTE—the merchant makes no trip to that great city but at the expense of his agricultural costomers: they pay the expense of his long journeys to the northern or eastern market, the expense of his theatrical amusements, the expense of trips of pleasure to Saratoga, and the tax levied by the great northern State on the auctioneer, of whom the merchant buys his goods—a tax more than sufficient for the liberal support of any one of these economical western or southern State Governments. They (the agriculturists) pay also not whatever the merchant chooses to contract for, for the transportation of his merchandize, its insurance, &c. but a large per centage on the amount so expended by him. Nevertheless, we cannot but admit that an honest, industrious merchant, is a very useful member of the community, as is an honest industrious lawyer, doctor, or mechanic—all, all such are honorable and worthy members of society; but they are all mainly dependent on the cultivators of the soil. If, then, as I contend, this great and independent class of the American family, constituting the main pillars of the Republic, FEED ALL, and CLOTHE ALL, and PAY ALL EXPENSES OF TRANSPORTATION, surely they will never hesitate to unite in favor of a system of internal improvements, which will reduce the expense of transportation *from 30 dollars to one dollar per ton;* or, in other words, from 60 *cents per ton per mile, to two cents per ton per mile!* More especially, when it is palpable that this immense reduction in the price of freight is inseparably connected with, and must necessarily result from, a system which will inevitably and forever render our merchants and ourselves independent of northern and eastern cities, and make our own southern and western sea-ports in all respects at least equal, and, in some respects, superior for commercial purposes, to those of any other part of the United States.

The following glimpse at a picture of the great west is taken from the same letter.

To say nothing of what must ere long be the surplus agricultural products of EIGHT HUNDRED MILLIONS OF ACRES OF RICH CULTIVABLE SOIL, favored with every advantage of a healthful and productive climate, in the valley of the Mississippi, where, though an increasing current of population is pouring upon this great expanse of surface, at the rate of nearly half a million of free people per annum, cultivation is apparently in its infancy, the greater part of the country exhibiting scarcely an acre in a thousand ever touched by the implements of husbandry. Nay, I have travelled 450 miles nearly in one direction, from Clay county, Mo. to Council Bluffs, and thence towards the falls of St. Anthony, over as rich land as I ever beheld, without seeing 500 acres of land in a state of cultivation, or 500 acres of uncultivable land. To say nothing of what may be the immense surplus products of 800,000,000 of acres of rich soil, whenever a hundredth part of it is put into a state of sound cultivation—products which surely will not be allowed to depend on one or two inconvenient markets, always expensive, and often glutted and uncertain—which products will and must find outlets and a choice of markets, such as the eastern and southern Atlantic States would afford by the proposed work—To say nothing of these incalculable products of the soil, I will conclude my views upon this branch of the subject, with an allusion to the *mineral wealth* of a small part of the valley of the Mississippi. *The Lead Mines* embrace, not a few acres, but MANY *millions of acres* of as great and continuous masses of as rich lead ore as any in the known world, averaging upwards of 80lbs. of merchantable lead to the hundred pounds of ore. It is believed that a contract to carry to Charleston or Savannah, a moiety of the Lead that could now be engaged at the present low prices, to be first delivered at Memphis, would, at two cents per ton per mile, secure to the rail-road proprietors, $500,000 per annum.

MARYLAND HORTICULTURAL SOCIETY—NOV. 1.

At a meeting of the society this day, the following resolution was adopted:

Resolved, That the following gentlemen be appointed a committee to take into consideration the expediency and practicability of procuring a lot for the purpose of building a Hall for the use of this society.

COMMITTEE—Messrs. *Joseph King, jr., B. I. Cohen, Wm. Gwynn Jones.*

The following gentlemen were proposed and duly elected members of this society, viz. Mr. *Henry Didier*, Mr. *John Ellicott*, Mr. *Elias Ellioctt*, Mr. *Edward Gray.*

ARTICLES EXHIBITED.

By Mr. Wm. Yeats, 3 very fine Turnips.

By Mr. John Feast, a new variety of culinary Sage; a branch of Euonymus atropurpurea, full of fruit; Crasula lactea; Garden Monthly Rose; pink Noisette Rose; Jacobeas, and five varieties of Chrysanthemums.

By Mrs. Geo. H. Keerl, a fine specimen of crimson Anemone flowered Dahlia.

GIDEON B. SMITH, Cor. Sec.

SUN-FLOWER SEED—CURE FOR FOUNDER.

"The seeds of sun-flower," says a correspondent of the Zanesville Gazette, "are one of the best remedies known for the cure of founder in horses. Immediately on discovering that your horse is foundered, mix about a pint of the whole seed in his feed, and it will effect a perfect cure." The seed should be given as soon as it is discovered that the horse is founded.

THE FARMER.

We copy from the Penny Magazine, the three following articles on the diseases of wheat. They cannot but prove highly interesting to farmers generally. Since we marked the articles for insertion, we have received the Farmers' Register for October, in which we find these same articles, preceded by notes by the editor of the latter, which also we copy.

DISEASES OF WHEAT.

[Notwithstanding all the labor of agriculturalists and of the men of science who have written on the diseases of wheat, there are few subjects more enveloped in obscurity, or offering more difficulty to the novice who endeavors to investigate the causes of any of the many diseases to which this plant is subject. It is not so much on account of the errors and mistakes of the various writers, (considerable as they doubtless are,) as to the facts they have asserted, that the difficulty has arisen, as to the want of *clearness and uniformity* in the use of names, and the uncertainty as to what disease is meant by any one particular name.—The terms *blight*, *mildew*, *rust*, *blast*, *smut*, *scab*, *stud*, *stunt*, have been used in either England or this country, so loosely, that it cannot be known what is meant by either, without a very particular description of the symptoms of the disease: and the symptoms are seldom described plainly enough for this end. A great service might be rendered by any person, who, from his acquaintance with the actual diseases, and with what has been published concerning them, could adjust properly terms and descriptions, and merely give a clear account of the opinions entertained in England and America, of the causes and remedies of the diseases of wheat, and how far those of the one country are identical with those of the other. This would enable us at least to profit by the knowledge already existing, but which is sealed up from most persons by the improper use of names, either by the writer or reader—and doubts are thus created, even as to the terms that are properly applied. But far greater benefits might be conferred on agriculture in this respect, if scientific men would pursue the investigation, and not only define the diseases, but search out their causes, and thence the remedies.

The three following papers on as many different diseases in wheat, are uncommonly satisfactory. The particular descriptions given, leave no doubt as to the identity of the first two with those we know as the *smut*, and the *blast* or *black-head*.—The writer has traced these diseases to their hidden causes by a course of patient and careful investigation—and thence has correctly deduced that the proper means to avoid the evil is to destroy on the seed wheat, the sources of the diseases which he had there discovered. Without this course of reasoning, or knowing the cause of the disease, farmers have accidentally found the benefit of liming the seed to prevent smut, ("the pepper brand") in wheat—and an experiment puhlished in the Farmers' Register, (Vol. 1. p. 275) shows the like benefit from a similar treatment of oats infected with the blast, (or "dust brand.") These coincidences of accidental practice with theoretical reasoning are highly satisfactory: and though, in these cases, accident had discovered the remedy more early than science had made known the cause, it does not therefore lessen the value of the latter mode of investigation. A very similar discovery has lately been published (page 219 of Farm. Reg.) of the eggs of the very destructive turnip fly being discovered on the seeds, *before* any effectual means had been found to arrest its ravages. If this fact is established, it leads at once to an obvious mode of destroying the insect, by some kind of wash for the seeds. The disease of wheat described last in order by the writer if it belongs to this country, is not known to us, but may be so to more close observers.

The descriptions of the author are accompanied by a number of figures, which serve, as well as his descriptions, to prove the identity of the first two diseases with those above named. But these figures are not necessary to farmers who know the actual diseases; and others which represent microscopic fungi and animalculæ, would be of no use to any who did not seek for the originals with powerful magnifying glasses. To save a considerable expense therefore, the figures are omitted, and also those passages which merely refer to the figures.]

THE SMUT BALLS OR PEPPER BRAND.

[From the Penny Magazine.]

[We are indebted for the following interesting paper to Francis Bauer, Esq., a gentleman who has attained a most deserved celebrity for his valuable discoveries connected with the diseases of grain, the most important article of human food.]

The existence of this destructive disease in wheat has long been known to every agriculturalist in England, as well as by those on the continent; but the real cause of it is yet very little known; not only by the practical cultivator, but even by scientific authors. Such erroneous and contradictory opinions have been advanced that the farmer cannot possibly derive any satisfactory information from them. I hope, however, that the following observations and illustrations of facts may be acceptable to some of the numerous readers of the Penny Magazine.

This disease is occasioned by the seeds of an extremely minute parasitic fungus, of the genus *uredo*, being absorbed by the roots of the germinating wheat grains and propelled by the rising sap, long before the wheat blossoms, into the young germen or ovum, where the seeds of the fungi vegetate, and rapidly multiply, thereby preventing, not only the fecundation of the ovum, but even the developement of the parts of fructification. In consequence no embryo is produced in an infected germen, which however continues to grow as long as the sound grains do, and, when the sound grains arrive at maturity, the infected ones are generally larger than, and are easily distinguished from, the sound grains, by their darker green color, and from the ova retaining the same shape and form which they had at the time when infection took place.

The name of the disease is also as undecided and various as the hitherto supposed causes of its existence, the most prevailing names in England, being *Smut Ball*, Pepper Brand, and Brand Bladders; and many others have been given to it, not only by the farmers in almost every county, but also by scientific naturalists.

No author has yet been found who mentions or describes this species of *uredo*, the distinguishing characteristic of which being its extremely offensive smell; I think the most proper specific name for it would be that of *uredo fœtida*.

The earliest period at which I discovered the parasite within the cavity of the ovula of a young plant of wheat (the seed grain of which had been inoculated with the fungi of *uredo fœtida*, and sown the 14th of November, 1805) was the 5th of June, 1806, being sixteen days before the ear emerged from its hose, and about twenty days before the sound ears, springing from the same root, were in bloom. At that early stage the inner cavity of the ovum is very small; and, after fecundation, is filled with the albumen or farinaceous substance of the seed, and already occupied by many young fungi, which, from their jelly-like root or spawn, adhere to the membrane which lines the cavity, and from which they can be easily detached in small flakes with that spawn: in that state their very short pedicles may be distinctly seen. At first the fungi are of a pure white color, and when the ear emerges from its hose the ovum is much enlarged, but still retains its original shape, and, the fungi rapidly multiplying, many have then nearly come to maturity, assumed a darker color, and having separated from the spawn, lie loose in the cavity of the ovum: the infected grains continue growing, and the fungi continue to multiply till the sound grains have attained their full size and maturity, when the infected grains are easily distinguished from the sound ones, by being generally larger, and of a darker green color; and if opened, they appear to be filled to excess with these dark-colored fungi: but the grains infected with the *uredo fœtida* very rarely bursts, and these fungi are seldom found on the outside of the grain; but if the grain be bruised they readily emit their offensive smell, which is worse than that from putrid fish. When the sound grains are perfectly ripe and dry, and assume their light brown color, the infected grains also change, but to a somewhat darker brown, retaining however the same shape which the ovum had at its formation; the rudiments of the stigma also remaining unaltered.

If the infected grain be cut in two, it will be found to consist solely of the uttermost integument of the ovum, filled with the ripe black fungi, without any tract of the embryo or albumen.

Plants of wheat infected with the *Pepper Brand* may be easily distinguished in the field by their size, being generally several inches higher than plants not infected, and larger in bulk; and I have found in all instances a greater number of stems produced from the same root, the ears containing more spickets, and those spickets more perfect grains, than were contained in those of sound plants, of the same seed, and growing in the same field.

One plant, produced from seed which I had inoculated, had twenty-four complete stems and ears, some of the stems with the ears measuring above five feet, every part of the plant proportion-

ally large, and all the ears entirely infected.—Another specimen had eight stems from the same root, five of them were above six feet high, and the ears entirely infected; the other three stems were considerably shorter, their ears smaller, and their grains perfectly sound.

This enlargement of the plant, however, is not to be attributed to the infection, but is undoubtedly the consequence of a luxurious vegetation, produced by a rich or moist soil, which secures and promotes the infection more than a dry or moderately rich soil.

Neither does this disease always affect the entire ear: I found some ears having one side infected, whilst the opposite side was perfectly sound. Sometimes five or six perfectly sound grains are found in an infected ear, and a few thoroughly infected grains are found in an otherwise sound ear. The infected grains are always in the last spicket at the apex of the ear; from which it appears that the infecting seed of the fungi did not reach the ovum before fecundation; in some of these grains a portion of the albumen was formed, but no trace of an embryo existed; but in others there was a considerable portion of albumen, and a perfect embryo formed.

At the time when the sound grains change their color, the fungi, being ripe, cease to multiply; they are all of a globular form, and nearly of equal size, viz. $\frac{1}{1600}$ part of an inch in diameter, Fig. 8 is $\frac{1}{1600000}$ part of a square inch on the micrometer; it sustains sixteen full grown fungi of *uredo fœtida;* and this square, being represented of the size of a square inch, English measure, is consequently magnified one hundred and sixty thousand times in superficies, and the sixteen fungi represented in that square are magnified in the same degree; showing that no less than two millions five hundred and sixty thousand individual fungi would be required to cover one square inch.

Fig. 9 represents a fungus not quite ripe, with its short pedicle; and fig. 10 a perfectly ripe one, both magnified one thousand times lineally, or one million times superficially. These figures are thus highly magnified, to show the reticular structure of these fungi, which forms the external membrane; and it appears that the internal substance consists of a cellular tissue.

Fig. 11 represents one of the fungi shedding its seeds, which is only observable when viewed under water. I could never yet see the seeds of these fungi in a dry state, for they then appear to be mixed with some mucous fluid, which causes them to adhere together in hard lumps.

That the seeds of the fungi of *uredo fœtida* are the sole cause of that destructive disease in wheat, the *Pepper Brand*, I think I have fully ascertained by numerous experiments of inoculating even the finest and purest samples of seed-wheat; and if that fact be admitted, it becomes evident that the prevention of it can only be effected by cleansing the seed-wheat so effectually, that every particle of the fungi and their seeds be entirely removed from the grains. But as these extremely minute fungi, when once mixed with the seed-wheat, insinuate themselves into the grooves at the backs and the beards at the tops of the wheat grains I think it almost impossible to dislodge them by the mere process of washing. I once received some samples which had been so prepared, and washed in salt water, and declared to be perfectly clean; but on my putting some of these purified grains into water, in a watch-glass, and leaving them to soak about twelve hours, on then bringing them under the microscope I found many of the fungi floating on the water. This fact convinces me that mere cleansing is no secure preventive of this disease; and that the most efficacious, and perhaps the only remedy for preventing it, is that of depriving the seeds of the fungi of their vitality. To effect this, innumerable remedies have been recommended, and I believe applied by the farmers, but have seldom proved entirely successful. From my own often repeated experiments, though on a limited scale, I am convinced that the best and surest remedy is to steep the seed-wheat in properly prepared lime-water, leaving it to soak at least twelve hours, and then to dry it well in the air before sowing it; but I fear that it will be found very difficult, if not impossible, even by this method, to kill the seeds of the fungi entirely, when the quantity of seed-corn is great; and consequently some infected plants might still be found in large fields.

Steeping and properly drying the seed-corn in the above manner, not only prevents the disease arising from the infected seed-corn, but does also effectually prevent the clean seed from being infected by the seed of the fungi, which might exist in the soil of a field on which diseased wheat had been growing before; and consequently the cleanest samples of seed-wheat should be steeped, as well as the most notoriously infected.

These facts I have ascertained by repeated experiments of strongly inoculating with the fungi seed-corn which before had been properly steeped and dried, and the result has always proved satisfactory, for the infection never took place.

Wheat is the only plant that is liable to be affected by the Pepper Brand, which is occasioned by the *uredo fœtida*. The Smut, or Dust Brand, is also occasioned by an uredo, but of a decidedly different species. F. B.

Kew, February 21, 1833.

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THE SMUT, OR DUST BRAND.

This disease, like the *Smut Balls*, or *Pepper Brand*, is occasioned by a very minute parasitic fungus, of the genus *uredo*, which Persoon (in his Synopsis Methodica Fungorum) notices as *uredo segetum*. It is, however, of a decidedly different species from *uredo fœtida*, which occasions the Smut Balls or Pepper Brand, illustrated in my former paper.

The *uredo segetum* is distinguished from *uredo fœtida*, not being muck more than one-half the size and by being perfectly scentless; whilst *uredo fœtida* is characterized by an extremely offensive smell. The manner in which *uredo segetum* acts upon the plants which it attacks is also very different, and the effect much more destructive than that of *uredo fœtida*, which only attacks the grains in which it vegetates, but seldom bursts; whereas the *uredo segetum* not only generally destroys the whole ear, but even the leaves and stem. Further, *uredo segetum* attacks not only barley, but wheat and oats; and I have been informed that other species of gramineæ are subject to its attacks, but I have not yet found any such specimens.

I have ascertained, by repeated experiments of inoculation, that the seed of the fungi of *uredo segetum*, like that of *uredo fœtida*, is absorbed by the roots of the germinating seed-corn, and, being so extremely minute, is mixed with and propelled by the circulating sap, and deposited in almost every part, even in the cellular tissue of the plant where these seeds continue to vegetate and multiply rapidly, as well as in every part of the plant where there remains the least vitality. The whole ear is often found entirely destroyed many weeks before the individual florets are quite developed, or the sound ears emerge from the hose. Sometimes, but rarely, the infection takes place after the parts of fructification have been formed, and even after fecundation has taken place; in that case the progress of the disease can easily be observed. The germen is generally the first attacked, and found partially, or half filled with the fungi, then the pistlis, the stigmas, the anthers; and even the extremely tender filaments appear full of black spots which are occasioned by small clusters of these fungi, which vegitate and multiply so rapidly that in a few days the whole ear is completely filled.

In oat-plants such late infection occurs more frequently than in barley or wheat, and the whole panicle often emerges from its hose, to all appearance in a perfectly sound state, or perhaps with only a few infected spickets at its base, but the infection soon spreads visibly through the whole panicle and over every part of the plant; and even when such a partially infected ear is separated from the growing plant, the vegetation and multiplying of the fungi continues as long as any moisture remains in that portion of the plant which has been so separated. I once collected and cut off several such partially infected ears, which I intended to preserve as specimens, and for that purpose I laid them in brown paper to dry them: they were accidently mislaid, and did not come into my hands again till after a period of six or seven months; when, on examination, I found that the whole specimens were consumed by the fungi. I have not the least doubt that the seeds of the fungi are shaken out by the wind; and that even many infected ears and plants are thrown on the soil of a field where such diseased plants have been growing, and that the fungi continue growing and multiplying on the soil, like those on the paper, until they become part of the soil, from which they cannot be distinguished.

I fear it will prove very difficult to find an efficient remedy to prevent, or even to check this destructive disease; and this fear seems strengthened by the consideration of the numerous remedies suggested by many eminent authors, as well in this country as on the continent. That the remedies of these authors should have failed in producing the desired effects is not surprising to me, for I find that the most eminent of them not only confound two or three distinct diseases, but are totally unacquainted with the real cause of any of the diseases: for some consider them caused by insects; some attribute them to blasts of the wind; others consider the disease to be a corruption of the sap of the plant. These, and many other causes, equally erroneous, have been

advanced; but I hope that, if it be admitted that the seeds of the parasitical fungi are the real and only cause of this disease, it will naturally occur to every one, that if the vitality of the seeds of these parasites could effectually be destroyed, the disease would be prevented. That the steeping in lime-water destroys the vitality, I have proved by many experiments; and also that lime-water has the same effect upon the seeds of the *uredo segetum*, as it has upon those upon *uredo fœtida*.

I fear that much difficulty will present itself to the steeping the seed-corn effectively, from the structure of the seed of barley and oats, the kernels of which are so tightly enclosed in the husks, that the lime-water cannot so readily penetrate, and reach the embryo, as in the naked seed-kernels of wheat and rye; but if some ingenious and unprejudiced practical agriculturist would make experiments on a large scale, by which every grain of the seed-corn could be effectually steeped in lime-water, I have no doubt but that the diseases of the *Smut*, or *Dust Brand*, and the *Smut Balls* or *Pepper Brand* would be effectually prevented, and perhaps, after repeating the experiments for a few successive years, these diseases might be entirely eradicated from the land. F. B.

Kew, March 3, 1833.

[We are compelled, however reluctantly, to postpone the other article till our next.]

THE BREEDER & MANAGER.

[From the London Lancet.]

LECTURES ON VETERINARY MEDICINE, *Delivered in the University of London, by Mr. Youatt.*—LECTURE VI.

ON POLYPI OF THE NOSE.—CORYZA.—NASAL GLEET.

Polypus in the Nose.—The first disease of the nasal cavity that will come under our consideration is *polypus* of the nasal passages:—

ON POLYPI OF THE NOSTRILS IN THE DOMESTICATED ANIMALS.

In the Horse.—By a polypus I mean an excrescence or tumour, varying in size, structure, and consistence, attached by a pedicle to a mucous surface. Portions of adipose matter, enlarged glandular bodies, and sarcomatous tumours of different kinds, are occasionally detached from the serous membrane of the abdomen and thorax, and hang loose and floating there; and on account of the horizontal position of the bodies of quadrupeds, they sometimes, in sudden and violent motion, entangle themselves round small portions of the intestines, and produce strangulation and death. The true polypus is attached to mucous membranes, and is usually found in the nostrils, the pharynx, the uterus, or the vagina. Tumours have been found hanging loose in the ventricles of the heart; and in the larger blood-vessels there have been accumulations of the fibrine of the blood, which, in their ramifications, the body and head being in the aorta, or even in the heart itself, and the limbs in the smaller vessels which branch from the aorta, have presented the appearance of an animal singular and frighful, almost beyond description. This is the polypus in the heart, and which, according to the opinion of the farrier, and even of some veterinary surgeons too, has destroyed so many animals.

Nature of the Polypus.—The polypus usually adheres to some portion of the superior turbinated bone, or it has come from some of the sinuses connected with the nasal cavity. It escaped, while small, through the valvular opening under the superior turbinated bone into the cavity of the nose, and there attained its full growth. The polypus of the horse is not the compressible elastic fungous on (*polypus elasticus*) which is described by writers on human surgery as occupying the nostrils of their patients. The bleeding polypus is little known, and the small portion of bloody fluid that often appears at the nostril, proceeds either from the vascular mucous membrane with which the tumour is surrounded, or from the membrane of the surrounding cavity abraded by long and violent pressure.

Some polypi have a fibrous, or almost cartilaginous, structure, and others appear to be composed of various little tumours agglutinated together. They are formed originally under or within the membrane by which the nasal cavity is lined, but no better account can be given of the cause of their appearance than of tumours in other parts of the body. They evidently, however, have a constitutional origin; they are frequently hereditary, and the animal in which they have once appeared is subject to a return of them. By some means, probably the increasing weight of the tumour, and being in a dependent situation, it is gradually detached from its base, and forces with it the soft and easily distensible membrane of the nose. As the polpyus continue to descend, this portion of membrane is farther elongated, and forms the pedicle or root of the tumour: a root it is not, for it is no continuation of the substance of the tumour, but a mere duplicature of its investing membrane. How this may be with regard to the fungous bleeding polypus of the human subject, I am not able to determine. The twisting of the pedicle, and tearing it out by the root, may be good practice with regard to the human being, but cannot be justified where the pedicle is a mere cord by which the polypus is suspended, and forms no continuation or part of its substance. The polypus, when it hangs free in the nasal cavity, is usually of a pyriform or pear-like shape; it is that form which it would naturally assume from the gradual distension of the membrane, pressing on every side of the tumour, and opposing its chief resistance at the base. It varies in weight, from a few drachms to three or four pounds.

Method of Examination.—I will now suppose a veterinary surgeon to be required to examine a horse that has some difficulty of breathing, apparently arising, not from disease of the lungs, but obstruction of some of the air-passages. He finds that there is a greater discharge than usual of mucus from the nostrils, or from one of them, and that mucus is sometimes highly tinged with blood, occasionally pure blood runs from the nose. If he places his hand before the muzzle, as if to ascertain the heat of the breath, he feels an unequal rush of air from the two nostrils, or probably it is felt from one nostril alone. He begins to suspect the real state of the case, and, bringing the horse into full light, he discovers, higher or lower in the nostrils, the rounded base of a polypus. He must, however, take care; he must not mistake the cartilaginous prolongation of the anterior turbinated bone for a polypus, when he sees it spread upon the false nostril, and enlarged and prominent from the general thickening of the mucus coat; nor the prolongation of the posterior turbinated bone, not quite so much developed; nor any rounded clot of blood which may have escaped through the valve under the posterior turbinator, and be retained there by the separated fibrine. This has been done by men of some repute. The case, however, shall be clear enough. How is the surgeon to proceed? Can he lay hold of the polypus by the finger, or the forceps, or (for these tumous do not possess much sensibility) the tenaculum? To ascertain this he will cast the horse, and fix the head in a position to take the greatest advantage of the light. If he cannot fairly get at the tumour by any of these means, he will let it alone; it will continue to grow—the membrane constituting the pedicle will be lengthened—and the polypus will descend, and be easily got at. Time and patience will effect wonders in this and many other similar cases.

The human surgeon speaks of the uncertainty of the appearance of the polypus. In damp weather it enlarges, the pedicle becomes more distensible, and the tumour hangs lower in the nasal cavity. If the weather is dry, and the membrane of the nose dry, the pedicle becomes somewhat dry too, and contracts, and the tumour itself diminishes, and it rises higher in the cavity; and that which can be plainly seen to-day will be invisible to-morrow. I have not had opportunity to observe this in the horse, but in polypus of the vagina in bitches I have found the tumour close to the external orifice, on one day, and on the next day there was not a vestige of it to be seen; and, probably, on the third day it has been lower than on the first, and more easily seized and disposed of; but I confess I have not traced any connexion between these changes and the changes of our variable atmosphere. Here, again, is occasion for the exercise of patience. If we cannot fairly reach the tumour, do not let us go to work at disadvantage; to-morrow, possibly, the pedicle will have lengthened, and we shall have a better chance.

Method of Operation.—We are now bringing down the tumour for operation: we must not use any great force. The polypus with which we have to do is not one that must be torn out by the roots. It is not the fungous bleeding polypus the pedicle of which may be a prolongation and portion of itself. The pedicle here is a mere duplicature of skin; it may be divided in any part of its course, and, divided at any assignable point, the tumour may with equal advantage be removed. Besides this, if the pedicle is attached to the delicate gossamer fabric of the turbinated bone, it cannot be forcibly torn thence without portions of the bone being likewise detached: and, connected with this, we should recollect that there is a disease of the nostril of the horse, which is the occasional result of injury of almost every kind inflicted on the Schneiderian membrane.

The tumour being brought down, a ligature must be passed round the pedicle, and as high up as it can conveniently be placed. If the polypus can be then returned to the nose, the animal will

suffer very little inconvenience; and in a few days the polypus will slough off, and the pedicle will contract and gradually disappear.

If the polypus is so large that it cannot be well returned, when it is brought down, we must notwithstanding, use the ligature. If we draw it but tight enough we shall cut off the supply of blood to the tumour, and we may immediately excise it, although it would be better if a few hours could pass between the application of the ligature and the excision of the part. Except the pedicle is exceedingly thick there will be little or no hæmorrhage. Should some bleeding occur, it will probably soon stop, or may be stopped by the cautery; this should however be avoided if possible, for our object is to produce as little irritation as may be, in the membrane, and the actual cautery will be applied with considerable difficulty in the cavity of the nose.

In very bad cases, when the tumour cannot be drawn without the nose, it may be necessary to slit up the ala or side of the nostril. It will be better, however, not to cut through the false nostril, for it consists of a duplicature of such thin integument, that the stitches can hardly be retained in it, when the horse will be continually snorting at the least inconvenience. It will also be difficult to bring the edges of this thin skin accurately together again, or, if this be effected, there is scarcely life enough in it for the parts readily to unite. The false nostril should be avoided, and the incision made along the lateral edge of the nasal bone, beginning at its apex or point. The flap will then conveniently turn down, so as to expose the cavity beneath; and there will be sufficient muscular substance to secure an almost certain union by the first intention. The nostril being opened, the pedicle will probably be displayed, and a ligature may be passed round it, as already recommended; or, if the pedicle be not actually in sight, it may probably be solicited or pulled down.

A French surgeon has advised, if the pedicle is not even now to be readily got at, to apply the trephine higher up; but it should be recollected that there is little or no chance of finding the pedicle in the superior meatus, and that lower down on the side of the face there is but one spot at which the trephine could be applied without its opening upon the interior of one or the other of the turbinators, where the pedicle never exists, and could not be got at. That spot is where, in the central meatus, the turbinated bones recede from each other, a little below the suture between the nasal and the superior maxillary, and about two-fifths of the distance from the apex of the nasal to the frontal bone.

If, perchance, a fungous bleeding polypus should be met with, and it should be deemed right to detach it with the forceps, let the cautious procedure of the surgeon be adopted. While torsion is used, let there be no pulling at the root. The pedicle will then give way at the weakest part, there will be no hæmorrhage, and there will be no lacerated membrane above, or detached bone, to produce malignant ulcer, or cancer, or glanders. Simple excision is never to be permitted, on account of the impossibility of stopping the bleeding without the cautery, and the difficulty and danger of applying that within the nose.

When a large polypus partially protudes at the nose, and cannot be got fairly down, the farrier's method of cutting away all that can be reached should by no means be adoped. The obstruction within is not removed when the external protrusion is cut away. The animal is not and cannot be in the least degree relieved; but the case will be agravated, for it will probably be necessary to apply the cautery to arrest the hæmorrhage and that will cause inflammation and enlargement, and the cavity will be more distended—possibly the septem will be partly forced into the other nostril, forming another obstruction there, and the very bones of the face will be disunited from each other. The exposed surface of the tumour thus mangled, and the ulcers made by the hot iron, will generally take on a malignant character, and fungus, gangrene, or cancer, will succeed.

An attempt to destroy the polypus by caustics will prove even more absurd and injurious.

Cases of Polypus.—I will conclude by relating one or two cases of polypus. The first is taken from "The Veterinary Instructions," by Chabert, a book not so well known nor so highly valued as it deserves.

A horse in one of the cavalry regiments had been observed gradually to lose flesh, and he was quickly and painfully blown at every little extra exertion of speed. After a while, fœtid matter began to be discharged from off the nostril, and the gland on the same side became enlarged, and the horse was supposed by the serjeant-farrier to be glandered (for there were no cavalry veterinary surgeons then in the French service,) and was treated accordingly. At length, to the confusion and astonishment of the man, a fleshy substance began to appear in the nostril, and which rapidly increased in size. The tumour continued to grow, until a great mass of it protruded, when the farrier, without appearing to be aware of the nature of the disease, or attempting to bring down the protruded part, cut it off. No benefit followed; the nostril was still stopped, the breathing laborious, and the horse daily becoming thinner and weaker.

A twelvemonth had now passed since the first appearance of the polypus, when the case attracted the attention of M. Icart, the surgeon of the regiment. More had protruded than at first. It was hard and glistening below, and fungous above; the bones of the nose were disjointed, and the face sadly deformed. He cast the horse, and slit up the nostril; when he not only found it completely filled by the polypus, and the the septum narium bulging into the other division of the cavity, but from long-continued pressure and inflammation, it adhered to the membrane of the nose in so many points, and so extensively, that it was impossible to get round it or move it. He contrived, at length, to fasten a crucial bandage around it, and it was torn out by main force. Four considerable portions of the turbinated bones were brought away with it.

The hæmorrhage was excessive; he, however, filled the nostril completely with tow, and brought the divided edges of the false nostril together by sutures. In three days they were all torn out by the incessant attemps of the animal to get rid of the obstruction; but the horse eventually did well. The polypus weighed two pounds and seven ounces.

M. Rigot, one of the French veterinary professors, relates a case of polypus of the nose which he treated successfully. A small tumour appeared in the right nostril, too high up to be got at. It seemed to occupy the same place, and be of the same size for a considerable time, when it suddenly began to grow. It soon appeared to be as large as a man's fist, and still increased, and occupied the whole cavity, pushing the septum into the left nostril, displacing the bones, and threatening immediate suffocation. It was red, and very hard. The nostril was slit up, the pedicle cut asunder close to the bone, and the cautery applied to arrest the hæmorrhage, and *prevent the reproduction of the tumour.*

A curious case came a few years ago before one of the provincial courts of France. A farmer purchased a four-year-old horse at a fair. A slight discharge was observed from one nostril, accompanied by cough, and some thickness of breathing. This was not thought extraordinary, as it was the *strangle age.* The horse was put to light work, and the usual remedial measures were adopted for his supposed condition; but he became worse, and at length could not be used. The purchaser attempted to return the horse, but this was resisted, on the ground that the term of warranty had expired. The case was brought before the provincial court. A veterinary surgeon was appointed to examine the horse, who deposed that there was a polypus in one of the nostrils, but so high up as scarcely to be seen, and that would have escaped his observation had not his attention been particularly directed to it; and that he believed, from what he could gather of the history of the case, that the polypus existed at the time of purchase. On this the court determined that the horse should be returned, although the term of warranty was expired, on the ground, that it was one of those obscure cases of unsoundness, the existence and the nature of which could not have been discovered within the prescribed time.

Polypus in the Ox.—Of polypus in the nasal passages of cattle there is but one case on record. An instance of it, however, has occurred in my practice. A cow seemed to be anxious to eat and was otherwise in good health; but occasionally she was unable to swallow, and the pallet was returned with an effort resembling vomiting. This increased until she was scarcely able to eat, and was rapidly losing flesh. I caused one of the pieces of wood through which the œsophagus pipe is usually passed to be made with an aperture sufficiently large for my hand to pass. The cow being placed against a wall, and her head tolerably secured by a rope placed round her horns, and drawn up by a pulley passing over a beam, and the mouth-piece well fixed, I passed my hand into the fauces, and distinctly felt a round body, moveable, and attached by a cord, the extremity of which I could not get at,—in fact, a polypus. I seized it with a pair of strong forceps with deeply roughened blades, and attemped the removal by torsion. The third turn being completed, the pedicle gave way, and a polypus nearly half a pound in weight was brought out.

(To be continued.)

THE GARDENER.

Maryland Horticultural Society.

At a meeting of the Council on Saturday evening, 25th Oct. the following Report of the late exhibition was read and ordered to be published:

Report of the Exhibition.

This Society, in accordance with a resolution of the Council, held an exhibition on the 14th and 15th October, at the Assembly Rooms, in Fayette street. It was one of the most splendid, all things considered, that has ever been witnessed in this country. The excessive and long continued drought, succeeded by very early and severe frosts, and these accompanied by a peculiarly uncongenial state of the atmosphere, had rendered our gardens, as it was thought, too barren of flowers to admit of much of a display. But the stimulus of the Horticultural Society excited the spirit of competition, and the tables, pyramids and stands at the hall of the Exhibition, bore ample testimony, that this spirit, when aided by skill and perseverance, is not to be restrained within ordinary bounds. The main object of the Exhibition was the display of Dahlias, a flowering plant of quite recent introduction, and one capable of greater variations in color and form than any other known. Till within a year or two this flower has not been produced here in sufficient variety and abundance to make it the object of an especial exhibition; but this year it was supposed our collections would warrant one, and we think the many visiters to our late exhibition will bear us out in saying, we were not disappointed. And here we may be permitted to remark, that the UTILTY OF THE HORTICULTURAL SOCIETY, and its claims upon the whole community for support and countenance, can no longer be doubted. The splendour of the late exhibition is justly attributable to it; while the evident improvement in our vegetable gardens may fairly be passed to its credit, and we may also claim for it the credit of a high degree of improvement in our fruit orchards, which is already apparent.

The Room, for the gratuitous use of which the Society was indebted to the politeness of Mr. Durocher, the present proprietor, and for which our thanks are hereby tendered to that gentleman,—was admirably calculated for the purpose. It was large, and well lighted by windows on three sides during the day, and at night by the chandeliers belonging to the house. The arrangement of the cut flowers was admirable, and well calculated to show them to the best advantage; for which, as well as for the whole "getting up" of the Exhibition, the gentlemen of the Committee of Arrangement deserve much credit.

The Society was also much indebted to the ladies who politely assisted in the disposition of the flowers, and contributed so largely to the tasteful arrangements, and decoration of the room.

The following were the most prominent objects at the exhibition. If we have overlooked any, it is hoped that it will be attributed to the proper cause, accident, for the Horticultural Society aims to be the beneficent patron of all and of each for the benefit of the whole community, uninfluenced by any minor consideration.

Ornamental Department.

Mr. Samuel Feast exhibited fine specimens of black pepper plant, cinnamon tree, ixora rosea, maranta zerbrina, dracena fera, camphor tree, nerium coronarium, cactus speciosus in full bloom, engrafted upon the cactus tuna, heaths, numerous varieties of roses, &c.; several boquets of cut flowers, and the following DAHLIAS, to wit:—Baltimore belle, crimson and purple, Edmondsonia, dark purple, purple globe; Henry Clay, dark crimson; Lady Russell, rich scarlet; King Solomon, very dark; Levick's incomparable, crimson and white; Major Jack Downing, very deep colored; Cohenia, bright scarlet; William Wallace, dark purple; Whigs of '34, dark crimson—all superb specimens, and others too numerous to particularise, of good varieties.

Mr. John Feast exhibited a splendid specimen of brugmansia (formerly datura) arborea in bloom, banana with fruit and flowers, beautiful specimen; date palm, New Zealand flax, pinus longifolia, mango tree, a fine specimen, hedicheum coronarium, sugar cane, &c.; and the following Dahlias, viz: Morning star, fine crimson; Foster's Constantia, beautiful scarlet; Cambridge surprise, &c.

Mrs. George H. Keerl exhibited the following Dahlias, viz. Lord John Russell, splendid rich scarlet, Amanda, rose color; purple globe, globe feathered scarlet, and General Jackson—all fine and beautiful specimens.

Mr. Gideon B. Smith exhibited the following Dahlias, viz: Ann McKim, a very large rose colored seedling Dahlia; Coal Black Rose, a fine black, seedling; Eliza Mayer, a fine purple, seedling; Mrs. Henry Clay, a fine royal purple, seedling; two very fine scarlet velvet, two superior royal purple, and a splendid crimson velvet, all seedlings; Goliah, a superb lilac, Lady Washington, a superior rose colored, and one hundred and five mixed varieties of seedlings.

Master Daniel Hook exhibited the Maria Adison, beautiful crimson Dahlia, a seedling produced by G. B. Smith.

Mr. John McKim, jr. presented the Daniel Webster, a splendid scarlet Dahlia, produced from seed by G. B. Smith.

Mr. James Wilks exhibited fine specimens of metrosidorus semperflorens in full bloom, hoya carnosa in bloom, double oleander, &c.

Mr. Henry Schroeder exhibited specimens of calicorpa Americana, Arum esculentum, &c.

Mr. E. P. Thomas exhibited a very fine plant of the cedar of Goa, said to be the largest in the country, cycas revoluta, ficas elastica, camellia oleifera, ruellia speciosa, nerium coronarium, &c.

Mr. B. I. Cohen presented several fine boquets of flowers.

Mrs. Emory presented the following Dahlias, viz:—Carlo Delia, yellow tipt with scarlet; Lord Lyndhurst, dark maroon; Dwarf pink; Theodore, beautiful lilac, Black prince; Groombirdges' Matchless, very dark purple, with several fine seedlings, boquets of flowers, &c.

Mr. Zebulon Waters exhibited several fine varieties of oxalis, calceoiaria salvifolia, amaryllis coccinia or bright scarlet, in full bloom, &c.

Mrs. Geo. W. Riggs presented numerous large boquets of beautiful varieties of roses and other flowers.

Mr. Robert Sinclair exhibited the following Dahlias, viz:—Cambridge surprise, dark lilac, Royal lilac, Prince's transcendant, &c. all very large and beautiful specimens, daily roses, &c.

Mrs. Wm. H. Freeman presented varieties of tea roses, single white camellia in flower, &c.

Miss Eliza Schroeder exhibited beautiful specimens of oak leaves with drawings of butterflies, &c. in the substance of the leaves.

Mr. Edward Kurtz exhibited the following Dahlias in pots in full bloom, viz:—Bonny Dee, a beautiful rich scarlet, Purple Globe, and Stephenia, all very fine. Also, crowea saligna, a new and very pretty plant, in flower; black and green tea plants in flower; ardisia crenata; tea roses, &c. and several boquets of cut flowers.

Mr. Henry Didier presented the *King of the Whites*, a splendid pure white Dahlia, and amongst the finest in the room.

Mrs. Muschett presented several large and splendid specimens of the Claudius Cæsar, a very rich scarlet, and several other varieties of fine Dahlias.

Mr. Hugh Brickhead presented some very fine Dahlias and boquets of flowers.

Mrs. Edmondson presented several fine boquets of flowers.

Mr. Henry Thompson presented a boquet of fine Dahlias.

Mr. E. W. Colburn presented a boquet of flowers.

Mr. I. I. Hitchcock presented some beautiful varieties of Dahlias.

Fruit and Vegetables exhibited.

By Mr. Samuel Feast, several very fine specimens of long green cucumbers.

By Thomas Dorsey, very fine salsify, carrots, parsnips, red pickling cabbage, chocolate corn, &c.

By Peter Nantz, crook neck winter squash, carrots, red top turnips, &c.

By Richard Vallentine, very superior large Lima beans, yellow raddish, &c.

By Peter Coombs, winter crook neck squash, very fine.

By Thomas Dixon, very superior carrots, parsnips, and beets, salsify, Lima beans, very large and fine, fine egg plants, &c.

By Caleb Whittemore, superior Mercer potatoes, long blood beets, scarlet and white radishes, long green cucumbers, winter crook neck squashes, very fine—one of them a *twin* red pickling cabbage, early purple cape brocoli, onions, &c.

By Robert Sinclair, Sen. winter crook neck squashes of the genuine kind, Mangold Wurtzel fair specimen of the roots selected for seed, specimens of the genuine long blood beet, Swiss chard, potato pumpkin, yellow summer radishes, &c.

By Gideon B. Smith, a specimen of the *Turnip Bean*, a new vegetable, which bids fair to become a valuable addition to our kitchen garden products. The plant resembles ordinary climbing beans, while the roots are similar to turnips; the flavor when cooked very fine, and excellent when eaten raw. Also some fine specimens of gourds of superior form.

By Mr. Edward Doran, specimens of superior celery of large size and well blanched.

By Mr. Henry Thompson, fine tomatoes, celery, &c.

By Mr. Peter Johnson, sweet potatoes, fine egg plants, tomatoes, carrots, &c.

By Mrs. Wm. J. Alcock, two peaches, weighing 11 oz. and 9 oz. remarkably fine specimens, from a seedling tree, apparently of the Heath variety. This peach will be a great acquisition to the orchadist from its ripening 3 weeks later than any known variety as yet in Maryland. The fruit is large, well flavored, and of a mottled red next the sun, which gives it the appearance of fruit ripened the 1st of September. This excellent fruit might have remained unknown except to its possessor, but for the existence of the Horticultural Society.

By Mr. Hugh Birckhead, a very large peach, weighing 17 ounces—a splendid Heath.

By Mrs. John Lester, some very fine pomegranates.

By Mr. Valentine, some very fine ripe figs, and purple Scuppernong grapes, good specimens for the climate.

By Mrs. B. I. Cohen, a basket of fine Isabella grapes.

By Mr. Zeb. Waters, a basket of excellent bland grapes, and specimens of bitter orange.

By Miss Eliza Schroeder, a plate of fine figs.

By Mr. Augustus Hack, fine specimen of the dwarf red pomegranate in bloom.

By Mr. Joseph King, jr. a large plant of the red pomegranate in full fruit.

By Mrs. W. H. Freeman, a very large plant of the white pomagranate with fine fruit, variegated orange in fruit, St. Helena lime in full fruit, &c.

GIDEON B. SMITH, Cor. Sec'y.

MISCELLANEOUS.

Tomatoes Preserve.

Mr. Editor. The tomato is favorably mentioned in your last number: it is a valuable vegetable. But I do not recollect, that in the variety of use to which it has been applied, your paper assigns it any place among the different species of preserves. As we are deprived this season of that pride of the fruit of Georgia, the *peach*, it may be of service to housekeepers to know that the tomato forms a most admirable substitute for the peach as a preserve. The flavor is almost precisely the same—it looks as well, and is altogether an excellent article for the tea table.

Directions.—Take good ripe tomatoes—peel them and preserve them with good brown or loaf sugar. If not peeled they burst, and do not retain the consistency so much desired by housekeepers, though they are very good without peeling. I give you this, at this time, that the industrious of the fair hands about your flourishing town may profit by it, before *Jack Frost* shall cut off their hopes from this new source of table ornament and luxury.—*Southern Planter.*

What o'clock is it?

When I was a young lad, my father one day called me to him that he might teach me how to know what o'clock it was. He told me the use of the minute finger and the hour hand, and described to me the figures on the dial plate, until I was pretty perfect in my part.

No sooner was I quite master of this additional knowledge, than I set off scampering to join my companions at a game of marbles; but my father called me back again: "Stop, Humprey," said he, "I have something more to tell you."

Back again I went, wondering what else I had got to learn, for I thought I knew all about the clock, quite as well as my father did.

"Humphrey," said he, "I have taught you to know the time of the day, I must now teach you how to find out the time of your life."

All this was strange to me, so I waited rather impatiently to hear how my father would explain it, for I wanted sadly to go to my marbles.

"The Bible," said he, "describes the years of man to be three score and ten, or four score years. Now life is very uncertain, and you may not live a single day longer; but if we divide the four score years of an old man's life into twelve parts, like the dial of a clock, it will allow almost seven years for every figure. When a boy is seven years old then it is one o'clock of his life, and this is the case with you; when you arrive at fourteen years it will be two o'clock with you; and when at twenty-one years, it will be three o'clock, should it please God thus to spare your life. In this manner you may always know the time of your life, and looking at the clock may, perhaps, remind you of it. My great grandfather, according to his calculation, died at twelve o'clock; my grand father at eleven, and my father at ten. At what hour you and I shall die, Humprey, is only known to Him to whom all things are known."

Never since then have I heard the inquiry, "What o'clock is it?" nor do I think that I have even looked at the face of a clock, without being reminded of the words of my father.

I know not, my friends, what o'clock it is with you, but I know very well what time it is with myself; and that if I mean to do any thing in this world, which hitherto I have neglected, it is high time to set about it. The words of my father have given a solemnity to the dial plate of a clock, which it never would perhaps have possessed in my estimation, if these words had not been spoken. Look about you, my friends, I earnestly entreat you, and now and then ask yourself what o'clock it is with you.

Culture of Sugar and Cotton.

On the comparative advantages of the culture of sugar and cotton, it may be remarked, sugar has been, and now is, depressed, but improving, with a good prospect of a gradual and steady advance, not only by reason of an increased and rapidly increasing home consumption, but from the decline of foreign competition, in consequence of the late measures of the British Government, concerning slavery in their West India Islands.

Cotton, on the other hand, has been for some years past the favorite and most profitable staple, and has probably attained its *acme* of success, and must soon decline from the excess of product and competition, both at home and abroad. Cotton is dependent upon foreign markets, while the sugar of the United States cannot supply the home market for half a century to come. In war, Cotton would not pay for the culture, while in war the price of sugar would more than double—so that to the new adventurer a serious question is presented, as to which of the two pursuits, *at this time*, would offer to him the most certain chance of success.

Composition for coloring and preserving gates, pales, barns, &c.—The following composition has been recommended, and is generally believed to be a cheap and excellent coloring, and preservative of gates, pales, barns, &c.

Melt twelve ounces of rosin in an iron pot, or kettle: and three gallons of train-oil, and three or four rolls of brimstone. When the rosin and brimstone are melted, and become thin, add as much Spanish brown, or red or yellow oker, (or any other color you want—ground fine, as usual, with oil) as will give the whole as deep a shade as you like. Then lay it on with a brush, as hot and as thin as you can. Some days after the first coat is dried, give it a second.

It is well attested, that this will preserve plank for ages; and prevent the weather from driving through brick-work.

Round Shot.—A correspondent in the United States Gazette gives the following as the origin of the discovery of making round shot:

"My father was a plumber in this city, and for a long time could think of nothing but how to make *round shot*. *Round shot* was the burthen of the night as well as the day. One night he was awakened by a blow in the back from my mother, who exclaimed, I have found out how to make round shot. I dreamed I was going into a shop to buy the child (myself,) a hat, when, on hearing a hissing noise proceed from an inner room, I was informed that they were making round shot; on going in, I looked up, and saw a man pouring melted lead through a sieve at the top of the building, which fell into a tub of water on the floor, and on taking some of the shot in my hand, I found they were perfectly round! My father exclaimed in ecstacy, you have found it out—immediately he set the melting pot to work, and on pouring some of the lead from the top of the stairs he found the shot much rounder than any which he had before made; at day light he poured some from the top of the leaning tower in the city, succeeded much better; and on pouring some from the shaft of a mine, he found that he had obtained "*round shot.*"

Thus the discovery was made by Mrs. Watts, and in justice it ought always to have been known as Mrs. Watts' patent shot.

Rice Griddle Cake.—Boil one large cup of whole rice quite soft in milk, and while hot stir in a little flour, rice flour, or Indian meal; when cold, add two or three eggs, and a little salt. Bake in small thin cakes on the griddle.

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Farmers pay all—Picture of the great West—Maryland Horticultural Society's weekly Report—Cure for Founder—Diseases of Wheat—Youatt's sixth Lecture on Veterinary Medicine—Report of the fall exhibition of the Horticultural Society of Maryland—To preserve Tomatoes—What o'clock is it?—Sugar and Cotton culture—Composition for coloring and preserving barns, gates, &c.—Round Shot—Rice Griddle Cake.

BALTIMORE PRODUCE MARKET.

☞ *These Prices are carefully corrected every* MONDAY.

	PER.	PROM	TO
BRANDY, Apple,	gallon.	$0 36	$—
Peach,	"	75	—
BEANS, white field,	bushel.	—	—
BEEF, on the hoof,	100lbs.	4 00	5 00
CORN, yellow,	bushel.	72	74
White,	"	72	74
New,	"	—	67
COTTON, Virginia,	pound.	13	14
North Carolina,	"	12	15
Upland,	"	14	16
FEATHERS,	pound.	35	38
FLAXSEED,	bushel.	—	1 50
FLOUR—Best white wheat family,	barrel.	6 25	6 75
Do. do. baker's	"	5 75	6 25
Do. do. Superfine,	"	5 00	5 25
Super Howard street,	"	5 12	5 25
" " wagon price,	"	5 00	5 18
City Mills, extra,	"	5 12	5 25
Do.	"	5 00	5 12
Susquehanna,	"	5 25	—
Rye,	"	—	—
GRASS SEEDS, red Clover,	bushel.	5 00	5 50
Timothy (herds of the north)	"	3 00	3 50
Orchard,	"	3 00	3 50
Tall meadow Oat,	"	2 00	2 50
Herds, or red top,	"	1 25	—
HAY, in bulk,	ton.	—	17 00
HEMP, country, dew rotted,	pound.	6	7
" water rotted,	"	7	8
LIME,	bushel.	30	33
MUSTARD SEED, Foreign,	"	3 00	4 50
Domestic,	"	5 00	6 00
OATS,	"	31	33
OIL, linseed,	gallon.	93	95
Castor	"	1 50	1 62
PEAS, red eye,	bushel.	—	—
Black eye,	"	85	—
Lady,	"	—	—
PLASTER PARIS, in the stone,	ton.	2 94	3 00
Ground,	barrel.	1 37	—
PALMA CHRISTA BEAN,	bushel.	1 50	1 56
RAGS,	pound.	3	4
RYE,	bushel.	67	68
TOBACCO, crop, common,	100 lbs	3 50	5 00
" brown and red,	"	5 00	7 00
" fine red,	"	7 00	9 00
" wrappery, suitable for segars,	"	6 00	12 00
" yellow and red,	"	8 00	12 00
" yellow,	"	13 00	17 00
" fine yellow,	"	15 00	25 00
Seconds, as in quality,	"	3 50	5 00
" ground leaf,	"	5 00	9 00
Virginia,	"	4 00	—
Rappahannock,	"	—	—
Kentucky,	"	4 00	9 00
WHEAT, white,	bushel.	1 05	1 14
Red,	"	1 00	1 06
WHISKEY, 1st pf. in bbls.	gallon.	32	33
" in hhds.	"	—	30½
" wagon price,	"	27	28
WAGON FREIGHTS, to Pittsburgh,	100 lbs	—	1 50
To Wheeling,	"	—	1 75
		washed.	*unwash*
WOOL, Prime & Saxon Fleeces,	pound.	50 *to* 60	24 *to* 26
Full Merino,	"	44 50	22 24
Three fourths Merino,	"	37 44	22 24
One half do.	"	33 37	21 22
Common & one fourth Meri.	"	30 33	18 20
Pulled,	"	31 33	20 22

BLOODED CATTLE.

ONE thorough bred Bull and one Heifer of the improved Durham S. H. breed, whose pedigree as well as appearance prove them to be valuable animals, one year old last Spring, may be had for two hundred and fifty dollars, if taken immediately. Also, several Bulls and one Heifer ef alloyed blood, for sale *very low*, if immediately applied for at this establishment. oct 28

GAMA GRASS SEED

JUST received, and for sale at this Establishment—Price 50 cents per ounce.

BALTIMORE PROVISION MARKET.

	PER.	FROM.	TO.
APPLES,	barrel.	$2 50	$5 00
BACON, hams,	pound.	11	—
Shoulders,	"	—	10
Middlings,	"	—	10½
BUTTER, printed, in lbs. & half lbs.	"	25	37
Roll,	"	15	22
CIDER,	barrel.	—	4 00
CALVES, three to six weeks old	each.	4 00	7 00
COWS, new milch,	"	22 00	30 00
Dry,	"	9 00	12 00
CORN MEAL, for family use,	100lbs.	1 56	1 62
CHOP RYE,	"	1 56	1 62
EGGS,	dozen.	15	—
FISH, Shad, salted,	barrel.	5 75	6 00
Herrings, salted, No. 1,	"	4 75	—
Mackerel, No. 1, 2 & 3,	"	4 75	6 75
Cod, salted,	cwt.	2 50	3 00
LAMBS, alive,	each.	1 25	2 00
Slaughtered,	quart'r	31	50
LARD,	pound.	10	12
ONIONS,	bushel.	62	—
POULTRY, Fowls,	dozen.	—	2 50
Chickens,	"	1 75	2 00
Ducks,	"	—	2 50
POTATOES, Irish,	bushel.	45	56
Sweet,	"	62	75
TURNIPS,	"	50	56
VEAL, fore quarters,	pound.	7	—
Hind do.	"	8	—

ADVERTISEMENTS

ORCHARD GRASS SEED.

A few bushels just received and for sale by the subscriber, at $3 per bushel. I. I. HITCHCOCK,
no 4 American Farmer Establishment.

FARMERS' REPOSITORY,
NO. 36 PRATT STREET,
Between Hanover and Charles street.

THE subscriber has been engaged for the last eighteen months adding improvements to his establishment, and now believes it to be equal in extent and convenience to any other establishment of the kind in the United States, and is prepared to fill any orders in his line on as reasonable terms, taking into consideration the quality of his work. It is his determination to procure the best materials, and to have the workmanship executed in the best possible manner, and to keep a general assortment of such implements of husbandry as give the most general satisfaction to farmers. It may be well here to observe, that there are constantly alterations making in Ploughs and other implements, which are no improvements, and are only calculated to give the purchaser double trouble by increasing his varieties without improvement—but all useful improvements the subscriber will continue to adopt as heretofore. I have on hand a large stock of implements, which I offer to the public, among which is my patent Cylindrical Straw Cutters, of various sizes, and prices.—These machines have been in operation 12 years, during which time I have sold nearly seven hundred of them, and I believe that no machine has ever been introduced that has given more general satisfaction. I have a large stock of Ploughs, of various kinds and sizes, wrought and cast shares, the most approved kinds of Wheat Fans, Corn Shellers, Harrows, Corn and Tobacco Cultivators; Rag Cutters, for Paper mills, Fox & Borland's Patent Threshing Machines, improved by myself, also, one of Z. Booth's Threshing Machines, with stationary horse power; Hay and Manure Forks; Tanner's Forks; Spades and Shovels; Field and Garden Hoes, Grubbing Hoes, Picks and Mattocks, Briar Hooks, Hay Knives, Caststeel Narrow and Broad Axes; common Straw Cutting Knives, &c.; and all kinds of Plough and Machine Castings, to suit Ploughs and Machines, made by me, kept constantly on hand; and all repairs done at short notice.

Also—will be kept constantly on hand, at retail, a general assortment of the Messrs. Landreth's celebrated GARDEN SEEDS—likewise, all kinds of Grass and other Fields Seeds, when they can be obtained of good quality.

A liberal discount will be made on my implements to those who purchase to sell again.

Oct. 28. 2t J. S. EASTMAN.

FRUIT AND ORNAMENTAL TREES.

THE subscriber has now for sale, at the Bartram Botanic Garden and Nursery, near Gray's Ferry a very extensive assortment of the finest ORNAMENTAL TREES, of all sorts suitable for planting in streets or avenues.

FRUIT TREES, of every good variety.
Hardy Flowering Shrubs and Evergreens.
Herbaceous Plants, Bulbous Roots, &c.
MEXICAN DAHLIAS, of 276 varieties.

ALSO,

A very large collection of the finest GREEN HOUSE PLANTS, including upwards of 1000 Camellia Japonicas of 80 varieties, 5000 Roses of 250 varieties, (chiefly new and hardy sorts,) 2000 Geraniums, of 130 varieties, with every other sort of plants usually cultivated for sale; all of which will be disposed of at moderate prices, and a liberal discount allowed to gardeners or others, who buy to sell again.

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ONE pair 2 years old, and one pair 3 years old, for sale at this establishment. Price $3 a pair. no 4

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FLUSHING NEAR NEW YORK.

WM. PRINCE & SONS have just published their *New Catalogue with greatly reduced prices*—application therefor must be made *direct to them per mail*. Every Department of the Establishment is in the most perfect condition in regard to the accuracy and superiority of its productions—and strangers are solicited to visit it and judge for themselves. The Fruit Trees are of large size, and in the most vigorous state, suitable for Orchards where prompt bearing is desired. Among these are the fine New Flemish Pears. Ornamental Trees and Flowering Shrubs can be furnished of the largest size, worth treble the price of small ones, as several years are thus saved in embellishment. The collections of Green House Plants, and hardy Flowering plants are particularly rich and interesting. The assortments of Roses and Double Dahlias comprise all the new splendid varieties, and each collection occupies above an acre of ground. Splendid Dahlias will now be supplied at $3, $4½ and $6 per dozen—each root a distinct named variety selected by us.—Of Bulbous Flower Roots the stock is so greatly increased, that they will be sold at very low rates.

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The assortment of garden, field and flower seeds, is exceedingly extensive, and forms a complete concentration of the choicest varieties known in Europe, and this country, all of which have been raised under our own inspection, or grown expressly for us, by our European correspondents. Their accuracy and excellence are expressly guaranteed, and *we ask no payment where the seeds do not prove exactly as represented.* Among the field seeds are the following: Perennial Ryegrass, New Italian do., Lucerne, Dutch White Clover, early Angus Oats, English Potatoe Oats, weighing 44 lbs. per bushel, Orchard Grass, tall Oats Grass, Trifolium Incarnatum, or early Crimson Clover, and 100 bushels Taylor's Forty fold Potatoe, also 50 bushels Potatoe Onions.—Venders of seeds, will be supplied at the most moderate rates possible, and at a credit to comport with their convenience.

Orders sent *direct per mail*, will have immediate dispatch, and every invoice emanating from us, has our *printed heading*, and *signature* and *no others are guaranteed.*

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THE FARMER & GARDENER;

AND LIVE-STOCK BREEDER & MANAGER.

CONDUCTED BY I. IRVINE HITCHCOCK, AND ISSUED EVERY TUESDAY FROM THE AMERICAN FARMER ESTABLISHMENT, AT $5 PER ANNUM, IN ADVANCE

No. 28. **BALTIMORE, NOVEMBER 11, 1834.** **Vol. I.**

☞THIS publication is the *successor* of the late **AMERICAN FARMER,** (which is discontinued,) and is published at the same office, at five dollars per year, payable in advance.

☞When this is done, 50 cents worth of any kind of seeds on hand will be delivered or sent to the order of the subscriber with his receipt.

American Farmer Establishment.

BALTIMORE: TUESDAY, NOVEMBER 11, 1834.

NEW CATALOGUE.—We have prepared and this day issue (in an extra sheet of this paper,) a new Prospectus and Catalogue of our establishment. We respectfully request each of our subscribers and all others who take an interest in such subjects, to aid us in circulating our said "extra." We have printed a large number and shall feel obliged to any gentleman who will send us his own address or those of any of his friends who would take an interest in our establishment, that we may send them copies through the mail or otherwise.

OUR PRICE CURRENT.—It has been remarked to us that our quotations, especially of Clover and Grass Seeds, are higher than those of the newspapers of our city, and that the reason is not obvious. The fact stated is true, and the reason is this:—The general commercial report is of course concerning the general markets, while *ours*, regards articles *of such quality as we are willing to furnish to our customers*, who order from us according to our own Price Current. Were we for instance to copy from the daily papers their quotation of the prices of Grass Seed, we should be bound to execute orders at those prices; and this would compel us to send to our customers articles that we are satisfied would not please them, such as Clover and ripple, orchard Grass and Garlic *mixed in various proportions*. To avoid this we quote such prices of these articles as we can supply them at, when to be had at all of the proper quality. Our price current generally corresponds with that of the "American," except in a few articles as above stated, for like the careful editors of that excellent commercial paper, we take our prices from actual transactions in the city.

BALTIMORE MARKET.—Several droves of cattle sold in the early part of last week at $4,50a4,75, in demand at these prices. A drove of 150 hogs was sold on Thursday at $5,87½ to butchers and market dealers. Three other lots (about 700) were sold in Franklin street at $5—and another lot at $5,12½.

WOOL is still in good demand at our quotations. Beans and Peas are much wanted, and would command good prices.

LIVE STOCK AND THEIR FOOD—One of the great objects for farmers, especially those with poor, i. e. *unimproved* farms, ought to be to economise fodder or provender in keeping live stock over winter. One of the means for passing this annu al *strait* successfully, and one too which many farmers too much overlook, is to reduce one's stock to the lowest number practicable, or else they will eat up all the earnings of summer. For the rest, ample provision ought to be made by the most exact saving, not only of hay and straw, but of root crops, corn-stalks, and whatever else can by the help of the straw-cutter and the steamer be converted into food.

CLOVER OF SORTS.—A southern farmer in a late letter to us on the subject of manuring with clover, says, he finds the southern or low red clover quite as good for land as the northern or tall sapling.

PREPARING FOR CORN.—Thus writes one of our southern correspondents, who is a master of his art:

"I am about to plough out 12 acres of land one way in ridges 4½ feet apart, by throwing three furrows together to decompose as much as possible by April for corn—the clover is eaten off it bare. If the three furrows leave any interval between, I mean to merely run a furrow or furrows across and plant my corn in April. Let the clover on the intervals spring up and grow as much as it pleases, till about 20th May, then lay it over with the plough and work all on top. I hope to save in this way some exhaustion of the soil.

THE TEA PLANT.—There is much error prevailing on this side of the cape of Good Hope, in relation to the Tea Plant, and the real differences among the various kinds of Tea imported from China. In the course of recent proceedings by the British government in fixing the mode of collecting the duties on this article, the question of kinds and distinctions was discussed; and the evidence taken by a committee of the House of Commons to ascertain whether it is practicable to distinguish accurately the different denominations of tea, contains information relating to the tea-plant differing from accounts heretofore given. According to the evidence of the Company's officers, the tea-plant in China has two distinct varieties, if not species, which respectively yield the *black* and the *green* teas. The tree, as is well known, is an ever-green, growing to the height of five or six feet. The pickings of the leaves begin in May, when the plant is in full leaf, but ready to shoot out other leaves.

In the *black* tea plant, the first shoot on the bud coming out, then covered with hair, forms the fine *flowery pekoe*. A few days' more growth makes the hair begin to fall off; the leaf then expands, and becomes the *black-leaf pekoe*. Some young shoots have fleshier and finer leaves, which make the *souchong*. The next best leaves make the *campoi*, the next *congou*, and the refuse and inferior leaves the *bohea*. These are the states in which the black teas are collected by the tea farmers.

The varieties of green tea appear to originate, not from the stages of picking, like the black, but partly from difference of treatment and manipulation, partly from difference of soils. A large proportion of *twankay* tea is the growth of a different district from that which produces the *hysons*. When a tea-merchant buys green tea from the farmer, he subjects it to the following process to obtain the varieties: he sifts it through one sieve, which takes out the dust, the *young hyson* and the *gunpowder;* then through another sieve, which passes the *small leaf hyson* of commerce; two other sieves successively take out the second and largest degree of size, and what does not pass the third sieve, forms *hyson-skin*. The teas then undergo the process of firing, in an iron pan, at a great degree of heat, which gives the leaves a tighter twist, and brings them up to their color. The tea which passes the first sieve is then put into a winnowing machine, and the fan blows out the light leaf at the further end, the larger broken leaf at a shorter distance. The heavier teas, as the gunpowder and hyson, fall nearer to or further from the hopper, according to their gravity, and are then separated by the winnowing machine. When fairly made, the difference between the young hyson and the gunpowder will be this: the young leaf, which takes the long twist, will form the young hyson, and that which takes the round twist will form the gunpowder.

At Ipswich Lamb Fair, a Mr. Ransome presented a *turnip slicing cart*, which will slice a load of turnips and spread them over the field for sheep, as the horse walks forward.

THE FARMER.

USE OF CLOVER.

To the Editor of the Farmer and Gardener—

Dear Sir :—I am exceedingly surprised to-day on reading the communication of Mr. H. C. Hoyt, of Washington, North Carolina, to find him so wholly unacquainted with the cultivation of clover, so exceedingly important in a system of farming. I rejoice to find one so far south making such inquiries. I have always believed that clover can be advantageously cultivated throughout Virginia and North Carolina, and even on highlands farther south. I would advise Mr. Hoyt to plough up as soon as possible this fall, 5 or 6 acres of his highest land, no matter how rich it may be, either in itself or by the application of well rotted manure ploughed in—let it lie till the first week of March, then stir it with the plough and harrow till it is perfectly mellow ; sow thereon about half a bushel of oats or two bushels of peas or beans suited to the climate, and harrow them well in—then sow a bushel of early Maryland clover seed; as soon as the clover grows to the length of an inch or thereabouts, let him sow on it one bushel of ground plaster to the acre, with 6 or 8 bushels of lime and as many of strong or leached ashes mixed up minutely together. If he does this on 6 acres of rich high or rolling soil of what is called a sandy loam, I think he will have clover. If he has not as good a crop at first, that is, in 1836, let him carefully gather the seed from his own clover and sow it again in the same manner, and thus pursue a course for the purpose of acclimating his clover. I cannot doubt for one moment that even his greatest efforts bestowed at first will in the end be amply remunerated.

You see I advise a small portion of oats or pulse to be sown, lest the young clover which appears to be a stranger in his region be smothered out or otherwise injured—yet something to shade the young clover is necessary—any other exposure than that of a south-western is to be preferred, where the object is to acclimate northern plants, to avoid the intense rays of a hot sun in southern latitudes. The lime and ashes are advised to supply a sufficiency of moisture in his hot dry climate—you know alkalies accomplish this when used in moderate quantities. I took in hand to induce a very worthy gentleman, Mr. Wilson, of South Carolina, then in Congress, to introduce the cultivation of clover in his part of the state—he bought seed and went home determined to do it, but he died the same year, and what trial he had made I never heard. A high or rolling situation composed of soil containing a small portion of sand I consider as most favorable for the cultivation of clover with the use of plaster—One fact every farmer must have observed, that seeds of all kinds will vegetate and maintain their hold better on rich than on poor land. I would also advise Mr. Hoyt, in his first essay with clover, to select a northern exposure.

I have no doubt from many trials that in this state (Maryland,) it is better to sow clover seed in April than sooner—severe frosts kill much of the young clover sown sooner ; mine sown this year the first week of April, has done admirably well. A Farmer of Maryland.

DISEASES OF WHEAT.

[From the Penny Magazine.]

The Grain Worms—Vibrio Tritici.

The existence of this most extraordinary disease in wheat has been, comparatively speaking, but a very short time known ; and it is only of a very recent date that it has attracted the notice of the practical agriculturists in this country. In July, 1807, I received for the first time, some growing specimens of wheat-plants infected with this disease, from Kent, where it was said that the disease had existed some years, and, from its spreading, had attracted the notice of the farmers. They distinguished it by the odd names of *Ear-Cockles*, or *Brown Purples*, on account of the distorted shapes and dark-brown color of the diseased wheat-grains, which bear some resemblance to a weed generally growing in corn-fields, and vulgarly called *Corn-Cockles*, or *Purples*, the *Agrostema Githago* Linnæus. In Hampshire the disease is called *Burnt corn.*

From continued supplies of fresh specimens from Kent, I have been enabled to ascertain many important facts respecting the nature and properties of the minute animals engendering this disease. These experiments and results were so far satisfactory as to establish incontestably the fact, that the white fibrous substances within the cavities of the distorted grains consist of real organized animals, endowed with the extraordinary property of having their power of motion suspended for a considerable length of time, and of having it again restored by the mere application of water. But how are these animals introduced into the cavities of the young germens ? And how are they propagated? These were questions which I could not at first answer, and I considered that these facts could only be ascertained by tracing the worms from the sowing of the seed-corn through the whole progress of the vegetation of the plant.

Being fully convinced that the worms or their eggs, like the seed of the fungi of the pepper-brand and dust-brand, must be absorbed by the germinating seed-corn, and propelled by the circulating sap into the young germens, and reflecting that I had successfully inoculated the wheat-grains with the fungi, I determined to try the same experiment with these worms ; accordingly, I selected a sufficient number of sound wheat-grains, and extracting a small portion of the worms from the cavities of the infected grains, (which had been previously soaked in water about an hour,) and placing some in the grooves on the posterior sides of the sound grains, I left them for some days to get dry, and planted them in the ground on the 7th of October, 1807. At the same time I planted some sound wheat-grains in separate holes, about two inches deep, and in each hole two or three infected grains also. About the middle of November most of the seeds had come up, and from time to time I took some of these young plants for examination, but did not perceive any effect of the inoculation till the 3rd of December, when, out of nine plants, five proved to be infected with live worms. In the first plant, after carefully splitting the young plant from the root upwards, I found in the then unorganized substances, between the radicle and the plumula, three young worms very lively, but not much larger than those with which the seed-corn was inoculated ; in another plant I found one full-sized worm, but no eggs about it ; in the third plant I found a still larger worm than the last, but in dividing the stem I had cut the worm in two, and it soon died ; it seemed to be full of eggs : in the other two plants I found some worms quite young, and some half grown ; but on the other four plants the inoculation had no effect. The fact that, at such an early stage of the vegetation of these inoculated seed grain, such large worms were found, confirms my first supposition, that it requires several generations of these worms to introduce their eggs into the young germens ; the large worms found in the substance of the young stem were undoubtedly some of the original worms with which the seed-corn was inoculated, for they were on they point of laying their eggs in that stage, and these eggs, being again propelled by the rising sap a stage further, then come to maturity, and again lay their eggs, and thus progressively reach the elementary substance of the ear, where they are finally deposited in the then forming germens ; the whole progress probably requiring three or four such reproductions.

(Mr. Bauer then describes many subsequent examinations of infected plants, referring to the representations and descriptions given. A detailed account of the nature and properties of these worms was laid before the Royal Society, read on the 5th of December, 1822, and published in the "Philosophical Transactions" of 1823, under the title of "Microscopical Observations on the Suspension of the Muscular Motions of the Vibrio Tritici.")

My experiments, for resuscitating the grain-worms, I have repeated almost every succeeding year to this day, and always with the same success ; but I find that the longer the specimens are kept dry, the grains require to lay in water a greater length of time before the worms will recover, and that, at every repetition of an experiment, a smaller number of worms recover their motion, and that after the same specimens (the produce of the grains inoculated in 1807) had been kept dry *six years and one month*, the worms were all really dead ; this period is the longest which I have as yet ascertained that these worms can retain their reviviscent quality.

That this disease is contagious, is sufficiently proved by the fact, that it can at pleasure be successfully inoculated on the soundest seed-corn. The infection, however, is not so generally nor so readily communicated as the diseases occasioned by the fungi of the smut-balls or dust-brand, a few infected ears of which are capable of contaminating and infecting the whole contents of a barn. Grains infected with these worms having no embryos, cannot vegetate and produce again diseased grains themselves, but can only communicate the infection by coming in contact with the germinating seed-corn in the soil, by the moisture of which the worms are revived and extricate themselves, which I have so often observed they do when kept some time in water.

Steeping the seed-corn in lime-water, in the same manner as advised for preventing the diseases occasioned by the fungi, is the most efficacious method of preventing the spreading of this

disease. I have repeated the experiment by inoculating, very strongly, sound wheat-grains with the worms, and afterwards steeping them in lime-water, and the infection was always prevented; I have also steeped some sound wheat-grains in lime-water, and after having kept them in a dry state for some days, I inoculated them strongly with the worms, but on examining the plants, not one instance of infection occurred. From these facts it is evident, that properly steeping the seed-corn in lime-water before sowing, is a sure preventive of the disease occasioned by grain-worms.

F. E.

[From the Southern Agriculturist.]

EFFECT OF MARSH-MUD ON VEGETATION.

A few days before the recent gale in August, we had about an inch thick of marsh-mud, (which had been thrown on the high ground, two months previous,) placed between five or six of the rows of an okra bed; shortly after the gale, we found the leaves dropping from every part of the okra, where no marsh-mud had been placed, and nothing but the decaying stalks are now remaining. The okra had arrived at its maturity, and agreeable to the laws of nature, is decaying. But those parts where the marsh-mud had been spread still remained in full and vigorous growth, and produce fruit as usual. Will some of the numerous readers of the *Agriculturist*, give an explanation of the causes of the above? Was there some property in the salt earth that produced it? Or may it have been produced by the roots having received an extra covering? May not the above fact be usefully applied to agriculture? The okra is very nearly allied to cotton, and was even placed under the same genus. May not the cotton plant be preserved from dropping its bolls at the particular season, by the timely application of marsh-mud?

[From the same.]

FREE SCHOOLS; BY A FARMER.

Mr. Editor,—Among the great improvement of the present times, the facilities given to modes of education, may be regarded as of the greatest importance; and none of these is more deserving of attention, than the plans by which the children of the poor are made to defray the expenses of their tuition, by their industry, either wholly or in a great part. This has been in an especial manner successful, in the institution of Mr. Fellenberg, at Hofwyl, in Switzerland; and as one of the leading features of it, is to prepare the pupils to become tutors, and in turn to disseminate their knowledge in the same economical manner, we may look for the extensive diffusion of the system throughout Europe, and it is to be hoped in time, throughout this country, which is peculiarly well adapted for the reception of it. General Greene, at Washington (City,) is about to make it subservient to the promotion of cheap printing, and proposes to form a school of 200 boys, who are to support themselves by their labour, in that business, while at the same time they are to be educated and taught it as a trade. In the same way it may be applied to every other handicraft trade; but it is as relates to agriculture, that it is of most importance, in the Southern section of this Union, where that interest is so exclusively pursued.

Our Free School institutions which have done so much good, have yet been faulty in some important respects. It has been objected to them, that where the population is thin and scattered, the advantages cannot be participated in, by such as are unable to board their children near them—the distance precludes it—and in consequence, in districts where education is most needed, it is least imparted. Now, if the free-schools in the country districts were located on farms (and the cheapness of land offers every facility for this purpose) it would necessarily be a part of the plan, to have the children lodged and boarded at the school, that the division of their time, between healthful labour and study might be made. The habits of industry obtained at such a seminary, both from precept and example, would not be one of the least of its benefits; but the knowledge of a business, by which a living may be procured, at the same time, that the rudiments of learning are obtained, is an inestimable advantage; any system of education for those who are destined to labour, that stops short of this object, may be considered defective. Reading and writing are but preliminary steps to the formation of youths, for the business of life, and are imperfect without the latter, which is indispensable for their welfare, and to secure them from the evils of idleness and vice.

This outline may be regarded but as hints to introduce the subject to the consideration of the public. At a future time the details may be entered upon; and, indeed, by referring to the accounts of the Hofwyl school, which are to be found in the *American Farmer*, and other recent publications, every reflecting mind will be able to complete the system, which is as simple as it is useful.

A FARMER.

JUDGE BUEL'S FARM.

Judge Buel, who resides near Albany, has a farm which is the admiration of visitors. One, who recently had the pleasure of walking over it, writes as follows to the editor of the New York Farmer:—

Judge Buel is emphatically, and in the strictest sense of the phrase, a book farmer. He was bred a printer, and, I believe followed that business without having any practical acquaintance with farming, until about ten years ago he purchased the place where he now resides; but which was a piece of waste ground, considered of very little value, being very indifferent soil, run over with shrub pines and interpersed with marshes. This piece of ground which notwithstanding its location about two miles from the city, could never, at any time in its natural state, have been worth more than from 20 to 30 dollars per acre, would now be an object of speculation at two hundred dollars. This same spot which I have looked at with regret at its dreary appearance, as in former years I have ridden past it, is now, by the "book-learnt skill" of its owner, changed to a scene which a monarch might envy, and a philosopher of the most refined taste might long contemplate with pleasing admiration. In all his plans of operation, and choice in selecting subjects for cultivation, his only instructors have been his own reflections aided by his well selected library. * * Here the common agriculturist can see a piece of ground, which, ten years since, would scarcely have been taken as a gift, advanced in value from its cost, in less than ten years, more than six hundred per cent.; and in this dry and unproductive season, when farmers are cutting and clearing the ground of their withered and unripe corn, he can see a crop of from eighty to ninety bushels to the acre, and every other production of a well regulated farm yielding in proportion. And not only the agriculturist—the admirer of the beauties of nature may here view and contemplate the productions of every quarter of the globe; the botanist, the horticulturist, and the florist may here increase their catalogues of subjects from the specimens before them, while the tyro in each branch may improve his knowledge by the scientific and instructive remarks and explanations of Mr. Wilson, the partner and overseer of the nursery and gardens.

BLUE COLORING MATTER FROM STRAW OF BUCK WHEAT.—We intended to have mentioned this subject earlier in the season, in order that some of our readers who had buck wheat upon their premises might try the experiment and ascertain more satisfactorily the facts of the case. But we will bring it forward now; perhaps it may be recollected in its proper season. The method which has been recommended for preparing the coloring matter from this plant is the following—Cut the stems before the grain is fully ripe, and spread them upon the ground exposed to the sun and thus exposed until the seeds drop off with ease. When the grain is separated from the stems, they are thrown into heaps, moistened with water, and left to ferment to such a degree, that decomposition takes place, and a blue color is developed. It is then formed into balls or flat cakes which are dried in the sun or by a stove, after which if the balls be boiled in water, they impart an intensely blue color which is not affected by vinegar or oil of vitriol. It may be converted into red by adding an alkali as potash or soda, with Nutgalls it strikes a blacker color, and a very fine green is afforded by evaporation. It is said that stuffs dyed blue by this preparation retain their colors well, and appear very handsome.

We have never prepared any coloring matter from this plant, nor can we vouch for the truth of the above statement, but certainly, we think it worth a trial.

HOPS IN MAINE.—The Hop crop seems to have been very abundant in Maine the past year. A Bangor paper says there are farmers within thirty miles of that town who have taken a thousand dollars in cash as the clear income from their crop of Hops the present season.

German Geese.—The Old Colony Democrat says, that George Sisson of Warren, R. I. has a large flock of German Geese, imported by the late Judge Sisson. They are much larger than the common native breed; weighing when fat 17 or 18 lbs. The flesh is of an excellent color and flavor. They are said to be entirely free from the odious squalling, flying and creeping characteristics of the native breed.

Idleness is the sepulchre of a living man.

THE BREEDER & MANAGER.

[From the London Lancet.]

LECTURES ON VETERINARY MEDICINE,

Delivered in the University of London, by Mr. Youatt.—LECTURE VI.—(Concluded.)

Nasal Polypus in the Dog.—A dog was brought to me a few days ago with a polypus completely occupying one of the nostrils and protruding more than half an inch. It was a soft, compressible, but not bleeding polypus. The animal did not seem to be so much inconvenienced as I should have imagined, and breathed freely through the other nostril. It had been observed more than a twelvemonth; it seldom protruded further than when I saw it, and was sometimes invisible for one or two months. As I was gently pulling it as far down as I could, in order to fix the ligature as high up as possible, the dog struggled violently and the polypus was torn out by the roots. I use the word in the plural number; for there were, as you will perceive, two distinct pedicles or roots, both attached to the body of the tumour, appearing to be continuations of its substance, and gradually diminishing until they seemed to terminate in a thin membrane. A few drops only of blood followed the removal of the polypus, and the animal did well. Nasal polypi are not of common occurrence in the dog.

CORYZA.

By coryza I mean inflammation of, and defluxion from, the nasal cavity, or the cells with which it is connected. Catarrh is the same affection extending to the fauces. It may be so far connected with catarrh as being often the precursor of it, but it is a distinct affection and of no unfrequent occurrence. From exposure to night air or to cold we feel a partial obstruction in the nose, a slight heaviness, a pain in the forehead in the region of the frontal sinuses, and an increased defluxion from the nose. This is sometimes the precursor of a more extensive and worse disease, but often it goes off with little care, and is scarcely worthy of attention.

In the Horse.—So in a horse we can easily trace the slight and circumscribed affection. From exposure to cold, or from some unknown cause, he appears to be a little heavy; there is a slightly increased labour in respiration, a little redness of the nostril, and defluxion from it, and weeping from the eye, but no heat of the mouth, and no acceleration of the pulse. We give him a warm mash, and all goes off.

But we have seen that the lining membrane of the nose is an exceedingly sensitive one. It is, besides, too much exposed to unnatural stimulus, and becomes debilitated and disposed to take on inflammation. The extreme changes of temperature under the influence of which he suffers would scarcely be thought credible. Twenty hours out of four-and-twenty he stands in a heated stable, into which not a breath of pure and cool air is admitted, and then he is suddenly led into an atmosphere 30 or 40 degrees lower.—Nothing can be so injurious as these sudden changes. The animal frame may be gradually inured to any thing. We may enjoy equal health when the thermometer is at 90 in the shade, and when it is almost as low as zero; but these sudden and extreme changes nature cannot bear, and, applied to an enfeebled part, or an enfeebled constitution, they are downright murder.

I am not now speaking of the general effect of our absurd and cruel treatment—the constitutional derangement produced by the sudden revulsion of blood from the integument to the vital parts, or that which must be the consequence of the full sedative of extreme cold, brought suddenly to bear on an animal highly excited, and every vessel and every pour dilated, nor on the other hand, when the circulation loiters in the veins, and the part is exhausted by cold, the dangerous consequence of the blood again violently rushing on, and distending the constructed and paralised vessels.

I have now to do only with the Schneiderian membrane,—that membrane, indeed, which is first and most exposed to these changes and injuries, and which has been previously debilitated by other causes. In my last lecture, I spoke of the mucous membrane of the nose as the guard of the lungs; as arresting every deleterious substance, whether gaseous or more material; and how much has it to do here! To what a villainous compound of smells is the stabled horse exposed during the far greater part of his time! Our eyes weep, and temporary coryza is established if we remain in the stable but a few minutes. *He* lives there. All these pungent particles fall on the membrane of his nose—they are detained there; they make their full and worst impression there; then we cease to wonder that the vitality of the membrane is so much impaired; that inflammation is so easily excited, and so difficult to be subdued, and so much disposed to spread to neighbouring parts.

The frequent consequence of coryza in the horse is, as may be supposed from what I have said, the establishment of

NASAL GLEET.

The previous inflammation may have been slight, or it shall have passed altogether away; but there remains an occasional, and sometimes a profuse discharge. If it is of the natural colour and consistence, and flows with some regularity, it probably proceeds from the nostril. If it flows more irregularly, and is discharged by fits and starts, and in considerable quantities, it proceeds from the cells of the face or head. If it wears the tinge of the food, the pharynx is affected, and the tensor muscle of the soft palate is relaxed. If it is purulent it does not follow that there is ulceration, for this is the character of a mucous membrane under inflammation; but if the breath is fœtid, and blood mingles with the pus, ulceration has been established. This gleet will continue sometimes for weeks and months, and bid defiance to all our applications; if it does so, it too frequently degenerates in, or was from the beginning, another disease, the pest of the equine race. This other disease, glanders, is principally characterised by a defluxion from the nose, and inflammation and ulceration of the Schneiderian membrane. How shall we distinguish the one from the other? Not always with certainty; but there are landmarks which will not often mislead us. We shall understand them better by-and-by, when we have treated of glanders; but we must say something about them even now, for the life of a valuable animal may be at stake, or perhaps the safety of a whole stud.

The discharge of nasal gleet is of a mucous character and not very adherent; the discharge of glanders is more pellucid and sticky, and yet sometimes when the discharge of nasal gleet is small in quantity, it dries about the edge of the nostril, and gives an appearance of stickiness, difficult, very difficult to be distinguished from that of glanders, and requiring all our "tact, talent, and discrimination."

The discharge of nasal gleet is always more or less irregular; that of glanders is constant. The first is of an uncertain hue, white, yellow, brown, the other is usually pellucid. The first is free from smell, the second may be so, but it often stinks abominably.

The submaxillary glands are not always affected in nasal gleet, but generally they are a little soft, more enlarged, somewhat tender, and situated towards the centre of the channel. In glanders the glands are harder, not tender, nearer the jaw, and often adherent to it.

The membrane of the nose in nasal gleet is red, although indeed with variable intensity; but that of the glandered horse is pale or livid. If the membrane is abraded in nasal catarrh, the abrasions run in lines, and they are superficial; the edges are irregular and ragged. If the chancres of glanders run in lines, yet the ulcers are detached, rounded, deep, and the edges elevated.—Attention to these distinctions will preserve you from material error. I will suppose you to be consulted respecting a case of nasal catarrh. Be very guarded in your prognosis, and especially with reference to glanders. There may be little or no doubt in your mind with regard to the nature of the disease; yet be cautious. Remember that every disease that gradually impairs the strength of the constitution, may run on to glanders, and much more a disease of that membrane which is the very seat of glanders. You will guard yourself by a hint of this, that should the worst happen, it may not be imputed to you, that, where so much might be at stake, you had mistaken the complaint.

You are entering on the remedial treatment of it. It is one of the sequelæ of coryza or catarrh, or some worse affection of the chest. It may be merely a symptom of one of them. Does any febrile action accompany the discharge? The pulse, the mouth, the loss of appetite, do they indicate the slightest degree of fever? If so, attack it, give digitalis, emetic tartar, and nitre. If you remove the cause the effect will cease.

If there is no fever, but it is plainly a local disease, chronic inflammation of the membrane of the nose, you must treat it as such. Is there any medicine which seems to have its principal action on the Schneiderian membrane? I imagine that there is. Sulphate of copper is a general tonic, but with its principal determination to this membrane in restoring the tone of its debilitated excretory vessels, and enabling their orifices to contract. Its celebrity arises from this, and from many cases of nasal gleet being supposed to be cases of glanders. I will not deny that it has cured glanders—so has every stimulant, and so has

every sedative, and so has nature, unassisted by us. It should be given in doses of from ten grains to half a drachm. Here our veterinary practitioners are too apt to err. They are too fond of overwhelming doses of almost every medicine.—They are not content with a mild but permanent effect from the medicine which they exhibit, but they must do every-thing at once, and they thus totally change the character of the medicine, and instead of renovating, exhaust and destroy.

When I recommend so small a dose, I would urge you to look at the seats of the disease, and its connexion—the nature of the diseases of the mucous membrane—their insidious character—the danger of administering tonics too soon, and often of administering them at all. Our best veterinary writer, Mr. W. Percival, had seen so much of this, that, in one of his lectures, he declaims against the use of tonics altogether. This is wrong, but experience proves the impropriety of administering tonics too soon in a great variety of diseases, and the folly of giving them in great doses in any. Therefore give small doses, and except you are perfectly assured that all febrile action has ceased, and, even if you are, so liable is it in a mucous membrane to return, that these little doses must be guarded by an admixture of sedative medicine. Do that which appears to be contradictory. Blow hot and cold at the same time. While you stimulate a part, guard the constitution; and while you rouse and support the constitution, guard against the dangerous effect of tonics on some unusually debilitated and irritable part. It is in this double accomplishment of objects,—this regard to all connexions, and provision against all contingencies, that the perfection of practice consists. Then to my sulphate of copper I would add, in smaller doses, my usual fever medicine. I have seen much good effect from it, and I would recommend the practice to you.

A seton in the channel between the branches of the lower jaw has sometimes been useful as a derivative. Little restriction need be laid on diet; and to moderate work there can be no objection. Then, as a last resort, and a very excellent one, there is the *salt marsh*. We do not sufficiently know its virtue in many cases of this kind, and indeed in almost every disease. There are few tonics comparable to it. I know of nothing which so often succeeds in restoring the tone of any over-worked and debilitated part, or renovating the constitution generally.

[From the American Turf Register.]

OSAGE STALLIONS PROCURED.

[We feel much gratified that the experiment proposed by our correspondent with the wild stallion of the prairies, is in a fair way of being tried. In respect of our officers on the frontiers, we were sure that it was necessary only to show them a field in which they could display their enterprise and patriotism—men's names have been immortalized by deeds far less useful than that of introducing in a country, a more valuable race of horses.]

Fort Gibson, July 8, 1834.

After closing my official letter of yesterday's date, I opened it, for the purpose of enclosing this; believing it would be acceptable to General Gibson and Major Hook, as they are lovers of the turf, to inform them that Lieut. S. W. Moore, has just returned to this post from cutting a road to the mouth of *Faux Ouichitta*, and he has succeeded in purchasing from a party of Osage Indians hunting on the L'eau Blue, a couple of prairie studs. One of them he has brought in with him; he has fine hard hoofs, pretty good legs and muscles, his color is white and he is about 14½ hands high; Mr. Moore has named him Washita, the river on which he was caught. The other stud from an accident in one of his legs, he was obliged to leave with Lieut. Gatlin at Little river on the Canadian. He is also white, and about the same size as *Washita*. Mr. Moore describes him as far superior in bone, muscle and appearance to the horse he brought in; he has named him Blue Water, being the river he was caught on, and intends presenting him before the public.

You will see shortly an accurate description of these horses in the American Turf Register. They are both I believe eight or nine years old, and show the marks of many a well contested battle, and as they are uninjured from it, is an evidence I think of their superior strength.

Major Mason when the dragoons left this, took with him his blooded stallion, that he purchased I believe of Major Donelson at Washington, and a mare and colt, for the purpose as I understand of catching wild colts, but in this I fear he may be deceived in one particular, and destroy the value of the prairie horse. For if he should succeed in bringing in the *finest colt* of the prairies, he will, by raising him on other food than grass, destroy his patient endurance for *hard service without food*, and running on *soft ground*, destroy the muscle, bone and sinew, and the *hard flinty hoof* of the prairie horse, which is developed by their running in a state of nature, and being in continual alarm from enemies.

Besides we know that horses running wild in the prairie, have to fight many a *hard* battle before they are left in the *undisturbed enjoyment* of their flock, and a horse not possessing *great activity* and strength never can reach maturity.* This being the case I believe that Major Mason would do better to employ Indians to catch a stallion, than endeavor to raise a colt.

With great respect, Gentlemen,
I remain, your ob't serv't,
D. S. MILES.

[* What better guarantee could there be for the propagation of the qualities most desirable in the horse?]

Whimsical Horse.—There is a very fine horse in the possession of Sir Henry Meaux & Co. the eminent brewers, which is used as a dray horse, but is so tractable that he is left sometimes without any restraint to walk about the yard, and return to the stable according to his fancy. In the yard there are also a few pigs of a peculiar breed, which are fed on grain and corn, and to these pigs the horse has evidently an insuperable objection, which is illustrated by the following fact: There is a long deep trough in the yard, holding water for the horse, to which this horse goes alone with his mouth full of corn, which he saves from his supply. When he reaches the trough, he lets the corn fall near it on the ground, and when the young swine approach to eat it, (for the old ones keep aloof,) he suddenly seizes one of them by the tail, pops him into the trough, and then capers about the yard, seemingly delighted with the frolic. The noise of the pig soon brings the men to his assistance, who know from experience what is the matter, while the horse indulges in all sorts of antics, by way of horse-laugh, and then returns quickly to the stable.—*London Paper.*

Large Cattle.—This may certify that I, the weighmaster of the borough of Wheeling, Va. did this day weigh on the public hay scales, one Bull, the property of John C. Hull, Esq. which weighed 2275 lbs.—One Heifer Calf dropped on the first day of last April, as stated by Mr. H. which weighed 750 lbs.—One Bull Calf dropped on the 16th April, which weighed 637 lbs. Given under my hand October 25, 1834.

JOHN LAUGHLIN.

We are assured that neither of these calves have been forced, they have only had their mother's milk and tolerable pasture. One handful of meal or grain has not been fed, either to the cows or calves since last March.

Wheeling paper.

[From the Southern Planter.]

BRIMSTONE FOR CATTLE.

Dr. Bartlett.—It is probably not known to many of our farmers that Brimstone is valuable for cattle in keeping them from ticks. These vermin are not only filthy in their appearance, but an injury to cattle. A piece of Brimstone as large as a grain of corn, well pulverized, given in a little salt, will cause them to drop off, and prevent others from getting on for eight or ten days. I consider Brimstone as necessary for a Cow in the summer, as Salt. JACOB.

[From the same.]

CAUSES OF DEGENERATION IN CATTLE.

Dr. Bartlett.—I have often heard farmers say that their Stock appeared to decline in spite of all the feed they could give. This does not depend on food for a remedy; it is something founded in nature. Any species of animal nature will decline in a few generations when propagated by the same family blood. If they would know the remedy, they must change their breeders, in part only; for instance, no bull nor boar should be allowed to range in the same neighborhood more than three years, a bull more especially. This is verified by the numerous and healthy calves in a new country. It is, however, owing in part, to good range as well as a cross of blood.

JACK FARMER.

The Cooks and Physicians.—A certain physician when he visited his rich and luxurious patients, always went into their kitchens and shook hands with their cooks. 'My good friends,' said he, 'I owe you much, for you confer great favors on me. Your skill—your ingenious and palatable art of poisoning, enables us medical men to ride in carriages; without your assistance we should go on foot and be starved.'

THE GARDENER.

[From the Florist's Manual.]

TRANSPLANTING.

Transplanting is the changing of the localities of entire plants. It is effected by disengaging the roots from the soil, and placing them in new situations favorable to the growth and developement of the plant.

To accomplish this successfully it is desirable that the roots be preserved fresh and entire.

The proper seasons for transplanting ornamental and other trees and shrubs, are the spring and fall. Generally in October and November of the latter period, and March and April, of the former. It is commonly best in colder latitudes to remove the more delicate shrubs and trees in spring, but where the climate is not so severe the autumn is preferable. In the latter case, the winter is not so likely to prove injurious to them.

Those which are natives of countries equally cold and rigorous, with the one to which they are removed, may be transplanted either in the spring or autumn, indiscriminately. Such as are natives of warmer climates, and have become acclimated, by culture, to higher latitudes, may be transplanted in spring. They ought to have every advantage that the warm season can afford, previous to their exposure to the rigours of winter.

Plants transferred to a less favorable climate, should be removed at a period most favorable for them to support the change without injury. Delicate trees, when transplanted in spring, form new roots, that take firm hold of the earth during summer. Their roots become established in their position, so that there is far less prospect of injury, from the severities of winter. It is a matter of little consequence, however, at which of these seasons the hardy kinds are removed.

Plants, when taken from the earth to be transferred, should be removed with much care. Should any injury be sustained by loss or a mutilation of a part of the roots, the whole body of the plant, together with the roots, may be immersed in fresh water during a period of twenty or thirty hours, previous to setting it in the earth again.

The top is to be lessened in proportion to the loss the roots may have sustained. Otherwise the plant will perish from a loss of its wonted nourishment. The ordinary quantity of root being diminished, the exhaustion from *evaporation* will be greater than the *absorption* of the remaining portion of root, so that the plant will die by transpiration.

October and November, after the first frosts have arrested the progress of vegetation in woody *perennials*, is recommended as a proper season for *Transplanting* them. Some are of the opinion, that the Peach, Plum, Cherry, and most evergreens, succeed best when transplanted in spring.

Any trees, even the most delicate, may be successfully transplanted in autumn, if a little protection be afforded them by covering the root during the first and most trying winter. Where complete success is hoped, it is best to shift their locality in the fall, if possible.

The protection of most trees, shrubs, and woody plants, may consist in spreading a few inches of litter from the stable around the trunk and over the roots.

Moss from the meadow and ever-green boughs are highly recommended for the protection of delicate plants. They are not liable to undergo decomposition during the winter, and thereby injure and destroy what they were designed to protect.

Delicate plants are sometimes supposed to be destroyed by too much protection after being transplanted, when, in fact, they perish for want of it, being killed by the alternate freezing and thawing of the earth at its surface. This difficulty might have been easily obviated by covering them with evergreen boughs or meadow moss.

When trees or shrubs are transplanted in *autumn*, the earth becomes consolidated at their roots, so that the radical fibres soon take firm footing in the earth, and the plant is prepared to vegetate with the earliest advances of spring.

The excavation in the earth for the reception of the roots of trees and shrubs should bear some proportion to their size. They may generally be made from four to six feet in diameter, and of about eighteen or twenty inches in depth. Large trees will require a larger opening than this, and small ones not so large.

The yellow or sub-soil where they are to be located may be thrown out, and replaced at bottom with a fine mould, intermixed with a portion of good manure.

Trees transplanted should stand two or three inches deeper in the earth than they stood previous to their removal. In no cases should the extra depth exceed this.

The radical fibres are to be spread horizontally in their natural position, and the soil intimately blended with them and compactly pressed about the trunk and over the roots.

No manure should be permitted to come in immediate contact with the roots, though it should be plentifully placed about them on all sides. Should it touch them, they will be likely to sustain injury and rot.

The ground, before being trodden very hard about the roots, is to be plentifully moistened by pouring water about the plant.

In transplanting Evergreens, it is generally recommended, previous to treading the earth about their roots, to pour several gallons of water about the trunk, and, after filling in with earth, to finish by treading it as hard as possible for the space of half an hour or more. This would be a good rule to follow in regard to all trees of whatever kind.

June has been considered by many as the best month for transplanting *annuals* that are cultivated as Florists' Flowers, and September most suitable for transplanting *biennials*.

In transplanting plants of every description it is desirable that as much earth as possible be removed with the roots. If this be done, there will be less danger of their suffering by the change of situation.

Though moist, cloudy weather is generally best for transplanting, it should not be done when the ground is very wet. The earth should be only moderately moist, otherwise it will be clammy and heavy.

The operation of Transplanting is most successfully performed in cloudy days, and a little before evening previous to a shower. The reasons for this are obvious. If it be done when the earth is dry and in the middle of the day, plants require watering and shading for a considerable time afterwards.

If the root be small, or injured, or destitute of earth when taken up, it will require that the earth which is placed about it be made finer, and pressed more firmly, and that the plant be more plentifully watered. It will also require to be longer shaded.

Plants, transferred to pots and boxes, after having the soil pressed firmly about them on all sides, should also be plentifully watered and for some time shaded. Care is to be taken that the shell be placed over the aperture at the bottom of the vessel, otherwise the plant will perish through a superabundance of moisture. Saturation of the earth, without an outlet at the bottom, will rot the root and destroy the plant.

[From Goodsell's Genesee Farmer.]

ASPARAGUS.—ASPARAGUS OFFICINALIS.

Asparagus is a genus of plants belonging to the sixth class and first order, of which there are twenty or more species. *A. officinalis* we believe is the only species which has been found profitable for garden culture. It is one of the oldest culinary vegetables, having been cultivated from the earliest period of gardening of which we have any particular account.

It is a perennial, found growing in Sandy Plains, in the North of Europe, and also in some parts of England, mostly upon the sea shore, from which circumstance, the prejudice prevails that it is a marine plant and that salt applied to the beds is essential to its perfection.

Asparagus delights in a deep loose loam, and although found in dry sandy soils, yet in this climate we think it grows more thrifty in those rather moist than dry.

There has been a prejudice among farmers, that has retarded the cultivation of this useful plant, viz: that it could not be cultivated successfully, without a very considerable expense in preparing the beds for its reception. Formerly large pits were dug where it was intended to plant an asparagus bed, these were first paved with stone, and after that they were filled up with alternate layers of manure and loam, and some even supposed that bones, horns and brick bats, were necessary to complete the preparation. Common sense having dispelled many of these prejudices, asparagus is now cultivated upon the same principles as other plants, viz. by first making the ground rich and fine, and by careful dressing every year.

There are several varieties of the garden asparagus, as the large German, the red, and green topped, the battersea, Dutch, large reading, &c. The large German red, and green topped, are considered preferable.

Asparagus is propagated from seed, but is often increased by offsets from the old roots. Beds are thought to succeed best when set with young seedling plants, but the shoots will not be ready for use as soon as when set with offsets. The seed should be sown early in May, on a bed of light rich garden soil.

They may be sown quite thick, and allowed to grow in the bed one summer.

In the fall, or early in the spring a bed should be formed in some part of the garden where it is intended it shall remain, by trenching it 18 inches deep, and mixing with a suitable quantity of manure. Some prefer beds of only two and a half feet wide, calculated for two rows, set at 18 inches distant; others form their beds four feet wide and set three rows at the same distance. But of whatever width the beds are made, the roots should be placed at least 18 inches distant from each other, and should be placed nearly on a level with the walks between the beds. After the roots are placed upon the beds they should be covered over, about four inches deep with fine loose mould. The first year after setting asparagus should be allowed to grow without cutting, and in the fall after the frost has killed the tops they should be cut off, and the beds covered over three or four inches thick with stable manure. In the spring following, the manure should be made loose with a fork, but allowed to remain upon the bed, that the young shoots may be blanched, a greater length. The soil and litter should ever be kept six or eight inches thick over the crown of the roots. When good strong plants are set, they will produce shoots, fit for cutting, the second year after setting. The young shoots may be cut until the middle of June, after which they should be allowed to grow up for seed. In selecting plants for setting, none should be used which has not a good crown or bud, as the latteral roots or those destitute of buds will not sprout although they will remain in the ground many years without rotting.

In cutting asparagus, care should be taken not to injure the buds upon the crown which are close to the lower end of the shoot; for this purpose a knife with a narrow point should be used which should not be allowed to go as deep as the buds. When a bud of asparagus is well planted, it will continue to produce well for 12 or 15 years, and when it is found that the shoots decrease in size, a new bed should be formed before the old one is taken up, that the family may be constantly supplied with this wholesome vegetable.

The Savannah Georgian states that John Couper, Esq. of St. Simons, has on his plantation about fifty *date* trees. A specimen of the fruit was recently sent to Savannah, which is thus described:

"In the specimen before us, the fruit of a rich golden color is pendant in clusters of four to eight, at the extremities of slender stems, about a foot and a half long, which radiate from the very extreme of the branch of the tree. The stem is free of fruit for full a foot; it, like the fruit, is of a golden color. The whole number of dates on this branch amounted to about two hundred.—The fruit is not yet ripe. Inside it is firm and fleshy, with a sub-acid, but not a disagreeable taste."

The same gentleman has also succeeded in raising a large number of *olive* trees.

Preservation of Fruits and Flowers.—The London Atlas gives the following method (from Sir Robert Southwell) of preserving fruits and flowers throughout the whole year. It is a method somewhat troublesome and expensive, but may nevertheless be serviceable to some of our horticultural amateurs:

Take saltpetre, one pound; Armenian bole, two pounds; clean common sand, three pounds; and mix the whole well together. Then gather fruit, of any kind, that is not fully ripe, with the stalk to each, and put them, one by one, into a wide-mouthed glass, laying them in good order. Tie over the top with an oil-cloth, carry them into a dry cellar, and set the whole upon a bed of the prepared matter of five inches thick, in a box. Fill up the remainder of the box with the same preparation, and let it be four inches thick all over the top, and all round its sides. Flowers are to be preserved in the same sort of glasses, and in the same manner; and they may be taken up after a whole year, as plump and as fine as when they were buried.

MISCELLANEOUS.

Ripe Bread.—Bread made of wheat flour whem taken out of the oven or skillet is unprepared for the stomach. It should go through a change, or ripen before it is eaten. Young persons, or persons in the enjoyment of vigorous health, may eat bread immediately after being baked without any sensible injury from it, but weakly and aged persons cannot, and none can eat such without doing harm to the digestive organs. Bread after being baked goes through a change similar to the change in newly brewed beer, or newly churned buttermilk, neither being healthy until after the change. During the change in bread it sends off a large portion of *carbon*, or unhealthy gas, and imbibes a large portion of healthy, or *oxygen* gas. Bread has according to the computation of the physicians in London, one fifth more nutriment in it when ripe, than it has when just out of oven. It not only has more nutriment but imparts a much greater degree of cheerfulness. He that eats old bread will have more animal spirits than he would were he to eat unripe bread.

Bread, as before observed, discharges carbon and imbibes oxygen. One thing in connection with this thought should be particularly noticed by all housewives. It is, to let the bread ripen where it can inhale the oxygen in a pure state. Bread will always taste of air that surrounds it while ripening—hence it should ripen where the air is pure. It should never ripen in a cellar, nor in a close cupboard, nor in a bed-room—The noxious vapors of a cellar or a cupboard never should enter into and form a part of the bread we eat. The writer of this article has often eaten bread of this kind, and has felt strongly disposed to lecture the mistress of the house on the subject of keeping bread in a pure atmosphere. Every man and woman ought to know that much of health and comfort depends upon the method of preparing their food. Bread should be *light, well baked and properly ripened*, before it should be eaten.

The Tomato.—Our neighbour of the Republican has furnished us with a recipe for preserving this delightful vegetable, so that it can be had *fresh* throughout the year. It was communicated to the editor of the Republican by "a good old lady of his acquaintance."

"Recipe.—Slightly scald the tomatoes, until they peel readily: slice and mash them in a shallow dish; then dry them in the sun, or in an oven. After drying, they should be placed in an airy situation, to prevent their moulding. In this way they may be kept, ready for the stew pan, at all seasons of the year."—*Cin. Mirror.*

Going the Whole Animal—very piggish.—The committee appointed by the Worcester Agricultural Society upon the swinish multitude, thus eloquently describe their enviable condition:

"Men may talk and write about living like pigs. To live a pig, is to live like a gentleman and a philosopher. His is the highest praise an epitaph ever bestowed, to be useful in life and excellent in death. Although it is not permitted in the order of nature, for a pig to laugh, he enjoys the other great blessing of humanity, to be fat. Free from banks, business, politics, and speculation, he is unconcerned as the merchant, who, when waked early in the morning, by being told day was breaking, replied, as he turned again to his rest, "Let day break, he owes me nothing." In short, it is evident from an impartial comparison, that for real ease, luxury, and good living, if a man were not a man, he might as well be a pig."

Cholera.—We perceive by the papers received at this office that the dreadful malady continues to exist in several sections of our country. We are certain from much observation that the disease might be prevented in nine hundred and nine out of a thousand by proper measures. Cholera never invades the system without admonishing the individual; it is always preceded by diarrhœa.

Whenever diarrhœa occurs, it should be immediately checked, by Cholera mixture and Laudanum—or Laudanum alone.

We speak from certain knowledge, and we wish that this paragraph could find its way into every house in the land. *Our experience with the disease has been ample—and we say emphatically that the malady may certainly be prevented by checking the diarrhœa.* Emetics and purgatives should be avoided, they are dangerous medicines when a disposition to Cholera exists. Arresting the diarrhœa by an opiate, regulating the diet, and preserving the warmth of the surface are infallable in arresting that scourge, Cholera.—*Phil. Gazette.*

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BALTIMORE PRODUCE MARKET.

☞ *These Prices are carefully corrected every* MONDAY.

	PER.	FROM	TO
BRANDY, Apple,	gallon.	$0 36	$—
Peach,	"	75	—
BEANS, white field,	bushel.	—	—
BEEF, on the hoof,	100lbs.	4 00	5 00
CORN, yellow,	bushel.	70	74
White,	"	74	75
New,	"	60	67
COTTON, Virginia,	pound.	13	14
North Carolina,	"	12	15
Upland,	"	14	16
FEATHERS,	pound.	37½	40
FLAXSEED,	bushel.	—	1 50
FLOUR—Best white wheat family,	barrel.	6 25	6 75
Do. do. baker's	"	5 75	6 25
Do. do. Superfine,	"	5 00	5 25
Super Howard street,	"	5 12	5 25
" " wagon price,	"	5 00	5 18
City Mills, extra,	"	5 12	5 25
Do.	"	5 00	5 12
Susquehanna,	"	5 25	—
Rye,	"	—	—
GRASS SEEDS, red Clover,	bushel.	5 00	5 50
Timothy (herds of the north)	"	3 00	3 50
Orchard,	"	3 00	3 50
Tall meadow Oat,	"	2 00	2 50
Herds, or red top,	"	1 25	—
HAY, in bulk,	ton.	—	17 00
HEMP, country, dew rotted,	pound.	6	7
" water rotted,	"	7	8
HOPS—first sort,	"	18	—
second,	"	16	—
refuse,	"	14	—
LIME,	bushel.	30	33
MUSTARD SEED, Foreign,	"	3 00	4 50
Domestic,	"	5 00	6 00
OATS,	"	31	33
OIL, linseed,	gallon.	93	95
Castor	"	1 50	1 62
PEAS, red eye,	bushel.	—	—
Black eye,	"	85	—
Lady,	"	—	—
PLASTER PARIS, in the stone,	ton.	2 94	3 00
Ground,	barrel.	1 37	—
PALMA CHRISTA BEAN,	bushel.	1 50	1 56
RAGS,	pound.	3	4
RYE,	bushel.	67	69
TOBACCO, crop, common,	100 lbs	4 00	5 00
" brown and red,	"	5 00	7 00
" fine red,	"	7 00	9 00
" wrappery, suitable for segars,	"	6 00	12 00
" yellow and red,	"	8 00	12 00
" yellow,	"	13 00	17 00
" fine yellow,	"	15 00	25 00
Seconds, as in quality,	"	3 50	5 00
" ground leaf,	"	5 00	9 00
Virginia,	"	4 00	—
Rappahannock,	"	—	—
Kentucky,	"	4 00	9 00
WHEAT, white,	bushel.	1 05	1 14
Red,	"	1 00	1 05
WHISKEY, 1st pf. in bbls.	gallon.	32	33
" in hhds.	"	—	30½
" wagon price,	"	28	28½
WAGON FREIGHTS, to Pittsburgh,	100 lbs	—	1 50
To Wheeling,	"	—	1 75
		washed.	*unwash*
WOOL, Prime & Saxon Fleeces,	pound.	50 *to* 60	24 *to* 26
Full Merino,	"	44 50	22 24
Three fourths Merino,	"	37 44	22 24
One half do.	"	33 37	21 22
Common & one fourth Meri.	"	30 33	18 20
Pulled,	"	31 33	20 22

PEA FOWLS.

ONE pair 2 years old, and one pair 3 years old, for sale at this establishment. Price $3 a pair. no 4

ORCHARD GRASS SEED.

A few bushels just received and for sale by the subscriber, at $3 per bushel. I. I. HITCHCOCK,
no 4 American Farmer Establishment.

BALTIMORE PROVISION MARKET.

	PER.	FROM.	TO.
APPLES,	barrel.	$2 50	$5 00
BACON, hams,	pound.	11	—
Shoulders,	"	—	10
Middlings,	"	—	10½
BUTTER, printed, in lbs. & half lbs.	"	25	37
Roll,	"	15	22
CIDER,	barrel.	—	4 00
CALVES, three to six weeks old	each.	4 00	7 00
COWS, new milch,	"	22 00	30 00
Dry,	"	9 00	12 00
CORN MEAL, for family use,	100lbs.	1 56	1 62
CHOP RYE,	"	1 56	1 62
EGGS,	dozen.	19	20 00
FISH, Shad, salted,	barrel.	5 75	6 00
Herrings, salted, No. 1,	"	4 75	—
Mackerel, No. 1, 2 & 3,	"	4 87	6 75
Cod, salted,	cwt.	2 50	3 00
LAMBS, alive,	each.	1 25	2 00
Slaughtered,	quart'r	31	50
LARD,	pound.	10	12
ONIONS,	bushel.	62	75
POULTRY, Fowls,	dozen.	—	2 50
Chickens,	"	1 75	2 00
Ducks,	"	—	2 50
POTATOES, Irish,	bushel.	45	56
Sweet,	"	62	75
TURNIP,	"	50	56
VEAL, fore quarters,	pound.	7	—
Hind do.	"	8	—

ADVERTISEMENTS

WHITE TURKIES.

I HAVE now ready for sale several pairs of these truly beautiful fowls, at $5 a pair, they are of this year's crop. I. I. HITCHCOCK,
oc 21 American Farmer Establishment.

WOOL.

LYMAN REED & CO. Commission Merchants, No. 6 S. Charles street, Baltimore, Md.—devote particular attention to the sale of WOOL. All consignments made them will receive their particular attention, and liberal advances will be made when required. May 9.

AGENCY FOR TREES, &c.

THE subscriber respectfully offers his services to his customers and the public generally, as agent for the procurement of Fruit and other Trees. It may not be generally understood or duly considered, that few nurseries contain *all* kinds of trees in equal perfection. One, for instance, is celebrated for its fine apple trees, another for its peaches, and a third for its plums or pears, while scarce any of them can make up a collection of *all kinds* of trees of the best quality. In this respect the subscriber flatters himself that he possesses peculiar advantages. His own nursery is not extensive or forward enough to afford many trees for sale yet, and his acquaintance with nearly all the most eminent nurserymen in this country, and of the peculiar excellencies of their respective establishments enables him to select from them all, probably a better collection of fruit trees than any one of them can furnish. Trees ordered from any particular nursery, or to be selected by me, will be charged at nursery prices and 10 per cent commission added. Orders ought to be forwarded immediately, and all confided to the subscriber's agency shall receive his best attention.

I. I. HITCHCOCK,
Oct. 14. Amer. Farmer Establishment.

BULBOUS ROOTS.

HYACINTHS, Tulips and a general assortment of Bulbous Roots, suitable for the present season, for sale low at this establishment by
Oct. 28. I. I. HITCHCOCK.

BAKEWELL RAMS.

TWO Bakewell Rams of good size and quality, for sale by a farmer near Baltimore at $20 each. Apply to I. I. HITCHCOCK,
oc 28 American Farmer Establishment.

WANTED,

AT the American Farmer Establishment, ORCHARD GRASS SEED, for which the highest price will be paid; also, CLOVER SEED and TIMOTHY SEED will be either bought or sold on commission, by
Sept. 16. I. I. HITCHCOCK.

PUPPIES.

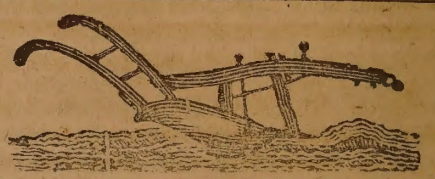
SEVERAL YOUNG POINTERS of the very best blood, will be old enough for sale, early in November. Also several young GREY HOUND sluts, from the pair sent from Europe to the president of the U. S., and by him presented to this establishment last fall.

Also one SLUT, one year old, from my grey hound slut, by a very fine imported Pointer. She appears to have the Pointer's nose and the shape and agility of the greyhound—color black. Oct. 7.

MORUS MULTICAULIS.

THE subscriber has on hand a few hundred of this celebrated Tree, unrivalled in the quality of its leaves as food for the silk worm, for which he is ready to receive orders (accompanied by the cash) with *particular* directions for the delivery of the trees on or after the first of Nov. next. Price 50 cents each, $5 per dozen, or $40 per hundred.

The success and ease with which this tree is propagated, the extraordinary quickness of its growth, the superiority of its leaves over *all* others for the silk culture, and its uncommon luxuriance and beauty, altogether recommend it to the favourable notice of *every farmer* as a most valuable acquisition. I. I. HITCHCOCK,
aug. 26 Amer. Far. Estab.



AGRICULUTURAL IMPLEMENT MANUFACTORY.

THE SUBSCRIBER respectfully informs his friends and the public, that he has on hand, and intends to keep, a general assortment of his PATENT PLOUGHS; also, an assortment on the principle of his recently PATENTED PLOUGH, which are acknowledged by those who have used them to be the best and the cheapest ploughs now in use. He manufactures HARROWS, CULTIVATORS, CORN-SHELLERS, THRASHING MACHINES, and other articles in his line; which, he trusts he can furnish of as good quality, and at as reasonable prices as they can be furnished at any other establishment in Maryland. He will, from his own Foundry, supply manufacturers with all kinds of Castings of the best quality metal, for Thrashing Machines of various powers; together with other Castings for Agricultural Implements. He will purchase, or receive on account, any quantity of old iron.

CAUTION.

Iron Founders, Manufacturers and others, who deal in or use the article, are hereby notified that the subscriber has recently obtained LETTERS PATENT for an Improvement on the Plough, which improvement consists of a peculiar form of share, which embraces both a share and two points, and is susceptible of a reverse application, and self-sharpening by the reversion of such application. A definite description or knowledge of the improvement may be had on application to the subscriber, or any of his agents. Every infringement on his invention, either by manufacture or sale without authority, will be subject to the rigor of the law.

RICH'D. B. CHENOWETH.

P. S.—At his old stand, near Front and Ploughman-streets, near Baltimore-street Bridge, or at Jno Gildea's, old Cheapside. Sep. 2—4t

GRAPE VINES.—The subscriber will receive orders for VINES from Mr. Herbemont's Nursery, till the 15th of November.

For extensive cultivation in this climate there is no grape so valuable as the Herbemont. But little inferior to many esteemed foreign varieties for the table, it is equal to any of them as a Wine grape, and surpasses them in the important qualities of abundant bearing and resistance of frost.

Persons in any part of this State, the District of Columbia, and in some parts of Virginia and Pennsylvania may avail themselves of this agency.—Price in Baltimore for 1000 Vines, $100; for 500, $62 50; for 100 do $15.

Oct. 28 4t. G. FITZHUGH, Jr.

THE FARMER & GARDENER;

AND LIVE-STOCK BREEDER & MANAGER.

CONDUCTED BY I. IRVINE HITCHCOCK, AND ISSUED EVERY TUESDAY FROM THE AMERICAN FARMER ESTABLISHMENT, AT $5 PER ANNUM, IN ADVANCE

No. 29. **BALTIMORE, NOVEMBER 18, 1834.** **Vol. I**

☞This publication is the *successor* of the late
AMERICAN FARMER,
(which is discontinued,) and is published at the same office, at five dollars per year, payable in advance.
☞When this is done, 50 cents worth of any kind of seeds on hand will be delivered or sent to the order of the subscriber with his receipt.

American Farmer Establishment.

BALTIMORE: TUESDAY, NOVEMBER 18, 1834.

UNIVERSAL EDUCATION.—We like exceedingly the spirit of the observations embodied in the following article, and therefore cheerfully lend *our* feeble aid in "seconding such efforts," and in spreading abroad the record of resolutions so honorable to the gentlemen who passed them, to our city and to the country.

In all systems of government or public economy, knowledge to a considerable extent is indispensable to the successful wielding of authority. Ignorance here is *invariably* productive of evil. Indeed knowledge is to ignorance what pure hydrogen is to atmospheric air—its natural tendency is upwards.

In all communities therefore where knowledge is confined to the few, in that few will reside "the government," and they will naturally use their power to keep the multitude in darkness; and this is precisely the case with a vast majority of our species, and the continuance of the relative position of the governing and governed, depends wholly on the success of the former in shutting out light from the latter. But moral or mental light like physical is difficult to exclude—it intrudes at every crevice and brightens and expands as it progresses. The spark struck by the inventor of the art of printing has arisen into a flame that is illuminating this hemisphere of our globe, and extending its gleams to the other. In the 18th century the phenomenon was witnessed on the western side of the Atlantic of a nation becoming so *hydrogenized* by a knowledge that "all men are born free and equal," and "that governments are instituted for the benefit of the governed"—that a majority of the people themselves turned rulers, concluded to dispense with masters, and live without being governed, or rather to govern themselves. Here was no new principle brought into action, but only a new application of that mentioned above, viz. that the possessors of knowledge are "the government." But in organizing upon the new plan we have assumed that every free white male of 21 years of age is qualified by knowledge to become part and parcel of the government; nay, not only so, but we have also declared that men of all nations seeking an asylum under our tree of liberty from the storms of despotism, also possess the knowledge requisite for governing; for, in the plenitude of our sympathy for such, we have invested them with the elective franchise, thus making them part and parcel of the government of this country. Without stopping here to enquire whether or not we have in this particular acted most judiciousiy, it is certain that what we have done cannot now be undone without breaking up our system; and hence, if we have committed an error, it becomes us to look about for a *practical* remedy. That remedy and the only adequate one that can be devised is to elevate to the requisite standard the mind of every *native* citizen of our republic by a thorough education. *Ignorant men require rulers, and must and will have them;* and when a majority of our electors shall be such, they will assuredly vote themselves, and their fellow-citizens, *subjects—slaves.* What then is the preventive of such a catastrophe? The Teachers' Lyceum of Baltimore have given a practical answer. Every child that grows up must be suitably instructed not only in science but in an art or occupation by which with his hands he can, if need be, earn his daily bread. No other than such are truly independent. In this view it is that we rejoice in such signs of the times as the following:

"At a late meeting of the Teachers' Lyceum in the city of Baltimore, it was resolved: "that the society will take immediate measures to ascertain the number of children in the city of Baltimore who do not attend school, and to use all proper means to bring EVERY CHILD within the pale of instruction."

We should like to see this example followed by similar associations throughout the Union. Let the labors of the members be directed to a more patriotic purpose than mere self-improvement, and let individuals who are not now members, second the efforts of such societies by joining them, or in any other way—but let all respectable men unite in furthering the universal dissemination of useful knowledge. It is essential to the existence of the Republic; for ignorance is not a disqualification to a voter in the eye of the law, whatever it may be in point of fact. We like the following remarks, from the Newark Daily Advertiser:

"It is, we apprehend, a great mistake, which some seem to have fallen into, to suppose because the sovereign power is in the hands of the people—its rightful proprietors—that therefore every thing must be right in the administration of it. The truth is that the bare location of the sovereign power either here or there, does not by any means secure its proper administration. It must be accompanied by intelligence, no matter who has the management. The concurrence of majorities will neither give justice to an action which is wrong, nor save a country from the natural consequences of political imprudence. Liberty itself will not perish sooner under the tyranny of a despot, than under the misrule of an ignorant people; nay, the latter may prove more fatal to it, since the restraining considerations of reason, of conscience, and of policy, which hold some influence over the passions of the most depraved individual, have very little over those of a misguided multitude. Hence it is plain that the strength and excellence of republican governments depends chiefly upon the intelligence of the people. Without such intelligence universally diffused their passage will be short through a turbulent existence, to an inglorious end: with it, they may hope for durability with greater reason than any other; for what inducement could a people have, who knew their proper interests, to attack a fabric which their own hands had reared, and when every injury inflicted upon it, would be in fact inflicted on themselves?"

PRESERVING BEES IN WINTER—Mr. Ethridge of Montrose, Pew, who keeps a considerable quantity of bees, buried several of his hives in the ground during the fall of last year. They were placed in a sufficient depth to be out of the reach of frost, and in such a manner that the air could by no means penetrate, being first covered with straw to about the thickness of ten inches, before being covered with mould; they were taken up in April, and the bees were found to be in good health. They had made use of no honey, as there appeared to be as much honey in the spring as when the hives were buried in the autumn.

[We would advise great caution in regard to such an experiment. That bees may be buried there is no doubt, nor any that they will refrain from eating in such a state—but that they should be alive in the spring is the incredible part of the story.]

THE FARMER.

On the use of Steam in Agricultural Operations.

We extract the following remarks from the (British) Quarterly Journal of Agriculture. The object of the writer is not to prove the practicability of applying the steam engine to the plough and farm vehicles—for this he considers already established—but to show the effect which this revolution will have on the profits of farming in Great Britain, by saving the expense of supporting animal power out of the produce of the land, and substituting for them a greater consumption of coal and iron.

"But though difficulties exist in the minds of agriculturists, who have not turned their attention to the subject, as to the possibility of extending steam to husbandry purposes, no difficulties exist in the opinions of many eminent machinists who have turned their attention to it. We have had conversation with several patentees, who have each assured us, that there are no practical difficulties in the case, provided there was any inducement for them to direct their skill to such a species of machinery. Mr. Phillips' getomic apparatus, the model of which we have seen, though far from being a perfect machine, is yet sufficient to show that a little farther simplification is all that is required to render it such. We are happy to say, that in our notions respecting steam-ploughing, whether as regards its practicability or importance, we are corroborated by a Fifeshire farmer, who, in a letter of the date 24th December, 1833, published in the Fife Herald, remarks, "that at present, when the ingenuity of man is upon the stretch to devise means to abridge human labor, and add to the comforts and intelligence of redundant and still increasing population—when, by our absurd laws, the manufacturer is under the necessity of giving an extravagant price for the first necessaries of life—when industry is fettered, and the growing resources of the country are circumscribed, our tenantry wasting their time and means, and crouching under the power of their proprietors, on account of a corn monopoly, I wonder it never struck some of our agriculturists that they might, like manufacturers, endeavor to under-sell their neighbors, and drive them out of the market. I know it will be said, that it is impossible—but what I am going to suggest, is a farther extension of machinery, to assist us in keeping ourselves a-head of our neighbors, and that is the application of steam to the working of ploughs. At present, it requires nearly the half of the product of a farm to pay the necessary expenses, and a great part of that goes to the keeping of horses, harness, &c. Now, if the farmer could get a steam-engine to work his ploughs, harrows, and rollers—thrash and shear his corn—cast his drains, and rid his land of large stones, he would be able to pay his present rent, although there were no corn-laws, and grain one-third cheaper than it is."

We have gone into all this detail, not because we advocate the application of steam to general locomotive purposes, merely from the love of change, without any other reason than that change is the order of the day. No, but because there are numerous weighty, and what ought to be *imperative* reasons, for the agricultural classes giving this matter their deep and serious attention. From the whole course of events, no man can be so blind as not to perceive, that upon the subject of the corn-laws, the agricultural and manufacturing classes are about to come shortly into a fearful collision. Cheap bread is a thing that our starving and oppressed people must have, either by a cheaper system of cultivation at home, or by importation of corn from abroad. The alternative is the choice between the life and the death of the State. For surely it is madness amounting in degree to theirs whom the ancients conceived were doomed to perish, to suppose that cheap bread, by a method that will ruin our domestic agriculture, will not precipitate the country, into that state of social disunion, which the whole tendency of our affairs shows to be in course of progression. Now, let it not be supposed that steam has nothing to do in maturing this condition. During the last quarter of a century, it has been applied to what may be called *physical* purposes only, *i. e.* to purposes which has materially abridged manunl labor, and multiplied almost indefinitely every species of commodity, whilst it has not been applied to any one purpose that has increased human labor, or saved the consumption, and cheapened the production of food. Consequently there has been a gradual disapproximation between the necessaries and conveniences of life, until, after nineteen years of peace, and what ought to have proved financial recruitment, it has reached an extent which has unbalanced consumption and production, to a degree which is paralysing all commercial and agricultural transactions, fearfully increasing pauperism and crime, fomenting sedition, and threatening the peace, order, and best interests, social and civil, of society.

The extension of steam to *economic* purposes, *i. e.* to purposes which will permit the removal of brute labor, will remedy the evils arising from its partial application; for, as we have shown, it will save and cheapen food, and that by a way which, over and above its improvement of internal communication, will improve the coal trade and iron trade, those pillars upon which the prosperity of the country is said to rest, as well as every department of manual industry. Applied exclusively to physical purposes, machinery as yet has, with all its advantages, been attended by evils far from being partial. Extended further to economic purposes, the good that will follow will not be short of universal. Hitherto its abuse, that is to say its former application, alone has been pernicious; now its use, that is to say its latter application, will be commensurately beneficial. Machinery has made goods,—machinery also must make a market. The existing circumstances of society demand this, otherwise all will terminate in convulsion.

In arriving, then, at the conclusion, that cheap bread of home growth, by artificial means, will alone prove an effectual remedy for our distress, we are led to say so, not because we are an advocate for *cheap bread*, abstractly considered. On the contrary, it is our belief that it is bread being too cheap already, which is the main cause of the distress which is so prevalent. It is for the benefit of no class or condition in the State, as bitter experience proves, that prices should be—what they now are and have long been—unremunerative. But what we contend for is this, that that as all the other producing classes in the State have artificially cheapened the cost of their respective productions, the agriculturists are bound likewise to follow their example, and cheapen theirs. At the present moment, more than two-thirds of the price of wages is spent upon the necessaries, and less than one-third upon the conveniences of life. There is not a laborer in the three kingdoms who does not feed his belly at the expense of his back. This is an evil of no trifling character, for it is one which affects the entire industry of the country; and farther it is one which, for the interest of all parties, ought to be removed without loss of time. In this way alone our agricultural consumers, instead of being cast into idleness and beggary, will have their condition improved, whilst all the other classes will be enabled to double their use of the conveniences of life. In this way the advocates for trade will procure the market at home, for which to obtain the privilege of searching abroad they are willing to destroy our domestic agriculture. * * * * *

No, cheap bread we must have, and cheap bread we shall have; but it is neither for our common nor individual interest that we should purchase it by the destruction of our home market. At the present moment, we pay yearly £80,000,000 for the corn which we consume. Of that sum full £30,000,000 go to support the animate brute machinery by which it is reared and transported. Here, then, is a system that requires revision—a repeal which will give us cheap bread, by a mode which will put us in all respects upon the same free trade footing as our continental rivals, besides superadding to all the outlets which our enterprise can find abroad, the best and surest of all markets, that of a new and prosperous one at home. At the present moment, twenty millions of our fellow-subjects may be said to be in the condition of non-consumers. With such a field, then, before us, as the regeneration of our domestic population, shall we omit, or postpone the opportunity which now presents itself, of achieving the formation of a community at home, who can make cheap bread at home, and to be so remunerated as to consume prosperously commodities made at home?

Hankering after foreign relations instead of minding the one thing needful, to provide at home that extended consumption which should bear an adequate ratio to extended production, has been the fatal rock upon which the vessel of our common prosperity has split. Owing to this error it is, notwithstanding all our ascendency in the arts of industry, we have forced our domestic population into a condition which makes vain and desperate all *natural* aids for any purposes which are more than palliating. And now we must retrace our steps, and regenerate society by the *artificial* means which the progress of invention has at length put within our power. The possibility is now given to us to remedy in this way the evils, which, situated as the country is, could not have been remedied by any other method. Shall the means then prove awanting? Already the substitution in question has been retarded for years, from no other circumstance than

want of co-operation, and if it be delayed a few years longer, that convulsion may take place, which, through the good providence of God, it seems provided to obviate. Had the application of elementary power contemplated merely a cheaper, quicker, better system of conveyance, we would not have taken up a subject which might tend only to urge it prematurely and improvidently into operation. No, but it is because the removal of brute labor will increase human labour, and cheapen food of home growth, at a moment when the want of these is threatening the peace and stability of society, that we see a case sufficiently strong to make the nation at large take up the subject as a national measure.

In order more effectually to promote this object, and carry the project extensively into operation, a *national institution of locomotion*, unconnected, with any trading company, is now in progress of being formed to promote the application of steam to general purposes of transport and husbandry, and to supply the desideratum which has long been experienced of there being no metropolitan association in connection with the various companies and local societies throughout the united kingdom, formed for the advancement of commerce and agriculture.

We need say nothing of the advantages to arise to our island transport and navigation, from an institution which shall watch over these important interests, and hold out premiums for improvements in them; neither how beneficial, as regards agriculture, will the existence of an institution be, which will serve for the united kingdom generally the similar important purposes to what the Highland Society is effecting for Scotland.

An institution likewise which shall concentrate genius and science of the country, and where at a glance the public will be able to see all that mind can devise, and ingenuity perfect, for the advancement of our social prosperity, will not fail, if supported as it deserves, to be productive of the most important benefits to the nation. That support, as far as one portion of the union is concerned, we trust it will find in the Highland Society and people of Scotland.

When we consider how exigent is the *want* which steam applied to economic uses is commissioned to alleviate, and how reckless in its consequences, as that volcano indicates whose eruptions are now nightly visible in the farm-yards of some district or other of the country, we consider it fortunate that, if *cheap bread* be wholly unavoidable, it can now be procured in a way that makes it wholly desirable. The bane of having prices reduced by steam transport, and the antidote of providing for the same by steam husbandry, are both before our agriculturists We cannot suppose that they will allow the one to be introduced unaccompanied by the other. In the hope that this will be the case, we cannot conclude this paper without congratulating all orders of our fellow subjects upon the bright prospects which the general application of steam to brute labor purposes opens upon us. At a moment when the resources of the country are no longer adequate to the wants of our population, "*when a restless spirit of discontent is every where abroad*," and cheap food of *home growth* is a *sine qua non* to an ameliorated condition, this beneficent agent steps in to accomplish what could not have been effected by any *external* process whatever. The speedy and general introduction of steam cultivation is all that is required to make cheap bread in Britain, in a way that will reduce no one to destitution in Britain. If our industrious classes must still earn and eat bread by the sweat of their brow, they shall nevertheless eat it in plenty, and in contentment. Under the social economy which the extension of steam to the purposes of animal labor will allow, it shall no longer be said that the wealthiest empire in the world, is also the most wretched one, or that, with all our boasted wisdom in science and art, we are unwise in that which not rightly to know is misery and unhappiness! The better policy of the age of steam must be to make millions rich instead of the units, —to render monopoly the property of the State and not of the stock-jobber,—to comfort a thousand happy homes, instead of building up one bloated capitalist. Steam which, confined to physical purposes, hitherto has wrought such marvels, extended further to economic uses, can achieve all this, for by *home means*, equalizing the price of necessaries and conveniences, it *will adjust production and consumption;* the unbalanced condition of which alone has deranged the currency,—paralyzed transaction,—abridged industry; and, in a word, occasioned all these evils which at length have produced a nation divided into usurers and paupers, to the danger alike of the constitution, the altar, and the throne. R. B."

[FROM GOODSELL'S GENESEE FARMER.]

PEAS; BY LIVINGSTON.

Mr. Goodsell,—Although peas are not extensively cultivated, as a field crop, expressly for their own produce, in this section of our country, yet they are often sown as a fallow crop, and are thought by many, under certain circumstances, to be preferable to summer fallows in preparing lands for producing the staple of our country.

Within a few years, there has been a great change in the practice of preparing land for wheat, and now, unless where the land is foul, fallow crops, are preferred to summer fallow, as they are succeeded by equally fair crops, without exhausting the strength of the land as much in proportion to the produce.

For this purpose few summer crops, are better calculated than peas. From the great extent of surface presented by their leaves, they are supposed to receive a very great proportion of their substance, from the atmosphere, at the same time, they protect the surface from the direct influence of the sun, and retard the decomposition of vegetable matter, contained within the soil.

I believe all the peas at present cultivated with us, either as garden, or field crops, are varieties of the same species, and all capable of thriving under the same cultivation. In speaking of the different varieties, it is very common to hear people say such a variety, are *garden* peas, and others are *field* peas. The impression that there is a difference between garden and field varieties, often prevents people from sowing the more valuable varieties, because they have seen them growing in a garden, or have heard them called garden peas. It is true that some peas, as the grey rouncival, and knights tall marrows, with such a length of vine, that it is doubtful whether they should produce as well if not supported by poles, as in garden culture, but all those varieties with moderately long vines may be as well grown in the field as in the garden.

Whether peas are intended for garden or field culture they may be divided into two kinds, early and late. Early peas are small, and only prized for their precocity, as they are not as fine for eating as some of the larger and later varieties. Among the best of our early varieties, are the early Charlton or Frame peas, the Washington or June peas, with several others in which there is hardly difference enough to make them distinct varieties; all names for a small round yellow variety which succeeds perfectly as well when sowed in the field at broadcast as when sowed in drills. There would be many things in favor of sowing these early varieties in fields instead of a small late pea which is often grown; they might be sown later in the season, and yet ripen soon enough to be harvested before the time for sowing wheat. Besides the varieties mentioned, there are several which are termed *dwarf* peas on account of their low growth, as their vines do not exceed one foot or eighteen inches in height, and when raised in the garden, they do not require bushing. Bishop's dwarf prolific, and the dwarf Spanish, are considered the best of the dwarf varieties. The more common varieties for field crops in this vicinity are marrowfat peas. They are double the size of the early or dwarf varieties, and grow to the height of four or five feet when supported with bushes or poles. Of these there are three varieties, two of yellow, one of which has a black eye, the other has not, and the other of a pale green color. The two yellow varieties are considered as the most prolific, and are somewhat earlier than the green. They are also preferred for cooking when green, but the other surpasses them for cooking when dry, and is altogether preferred for splitting. The green peas are not as subject to be injured by bugs as the yellow when sown at the same time, but were the yellow varieties sown later so as to ripen at the same time with the green, they would also escape.

When peas are to be sown as a preparatory crop, the ground, if smooth, should be turned over as smooth as possible, and the seed covered with the harrow, or it may be rolled, after which a light plough may be used to cover the seed without disturbing the first furrows.

Those who wish to carry their peas to market must be particular as to the time of sowing, in order to keep them free from bugs. In this vicinity the yellow marrowfoot peas, should not be sown until the 10th of June, but the green may be sown by the middle of May without danger.

The quantity of seed sown upon an acre, should be governed by the size of the pea, and the length of the vine—from two and a half, to three bushels per acre, of the marrowfat varieties, are commonly used. The quantity produced, is quite variable; in some instances forty bushels per acre have been harvested, while at others, not more than ten bushels have been produced.

The price of peas is also more variable than most kinds of produce, in Rochester market, varying from fifty cents to one dollar per bushel.

LIVINGSTON.

THE BREEDER & MANAGER.

[From Dickson's Live Stock and Cattle Manager.]

The Short-Horned, or Yorkshire Breed and Sorts.

The short-horned breed of cattle differs from the others according to the name by which they are distinguished, in the shortness of their horns, in being wider and thicker in their form or mould, consequently feeding to the most weight, in affording by much the greatest quantity of tallow when fattened, and in having very thin hides and much less hair upon them than any other breed, except the Alderney: the most essential difference, however, consists in the quantity of milk they give beyond any other breed, there being instances of cows of this breed giving thirty-six quarts of milk in the day, and of forty-eight firkins of butter being made from a dairy of twelve cows; but the more general quantity is three firkins the cow, in a season, and twenty-four quarts of milk in the day. Their great quantity of milk, the thinness of their hides, and little hair, are, probably, the reasons why they are tenderer than all the other kinds, except the Alderney. They are found to consume more food than any of the other breeds, which cannot be wondered at, when it is considered that they excel in three valuable particulars; affording the greatest quantity of beef, tallow, and milk. Their colours are much varied; but the generality of them are red and white mixed, or what the breeders call *flecked*, which, when properly mixed, is a very pleasing and agreeable colour. They are chiefly to be met with in Lincolnshire, and the eastern parts of the counties of York, Durham, Northumberland, and Berwick. This breed, originally imported from Holland, is frequently called the Dutch, and sometimes the Holderness breed, from a place of that name in Yorkshire, where it would seem to have been first established in this kingdom. The best and most perfect of this sort of cattle are now to be found on the banks of the Tees, and that neighbourhood.

A late writer, in his account of this breed, states, that, destitute of the exertion and agility of the middle-horned sort, they are not so well adapted for the cart or the plough: considering their size and the quantity of food they consume, they must be considered as inferior to any of the above-mentioned, and, when compared with the Suffolk duns, greatly so. Much attention was formerly bestowed by the graziers in the midland districts on the improvement of the long-horned breed of cattle; and a great number of eminent breeders have more lately embarked in the laudable undertaking of improving the short-horned breed; and from their knowledge, assiduity, and exertions, much has been expected and much done. Mr. Charles Collins, at Ketton, near Darlington, in Yorkshire, is supposed to have been long in possession of the best breed of short-horned cattle in England, and to have lately produced an improved sort of them, but which are not in so good repute for milking, though of large size and fine appearance. Other breeders have since raised an excellent sort of these cattle for milking as well as feeding, and most other purposes.

It is said by a distinguished writer on live stock, "that there are many reasons for thinking this breed has been imported from the continent: first, because they are in many places called the *Dutch* breed; and secondly, because we find very few of these cattle any where in this island, except along the eastern coast, facing those parts of the continent where the same kind of cattle is still bred, and reaching from the southern extremity of Lincolnshire to the borders of Scotland. The long-horns and these have met upon the mountains which separate Yorkshire from Lancashire, and by crossing have produced a mixed breed called *half-long-horns*, a very heavy, strong, and rather useful kind of cattle; but it is not found that the one kind has spread further west, nor the other further east. This breed, like most others, is better and worse, in different districts; not so much from the good or bad qualities of the land, as from a want of attention in the breeder."

The northern short-horned sort is the largest breed in the island, the Herefords being the next: they are an original breed; but whether those of the northern counties are so or not cannot at present be ascertained.

This sort of cattle, opposite in almost every respect to the long-horns, has great depth of carcase; and with ample substance, large bone, and thin hide, give much milk, which, however, is not distinguished for its richness. They are not of first-rate character as labouring cattle, which, nevertheless, the common variety seems to promise by their form. The coarse, square, *Dutch* beefy breed, is considered the basis of this breed. In many parts of the north they remain still coarse, and by no means equally disposed to large milking. The common Lincolnshire cattle of this kind are coarse in the head and horn, large boned, high upon the leg, and *ragged-hipped*. They are equally coarse internally, but produce flesh in great quantity. The Lincolnshire neat cattle, in fact, plainly demand an improvement, such as the sheep have received in the Dishley breed.

It is conceived, that the most accurately marked and permanently distinguishable varieties of the northern short-horns, are the good common, and Lincolnshire sorts. "Culley tells us, "that amongst the old stock there were some with black flesh which would grow but never fatten, provincially called *lyery:* these were to be known by the rotundity of their shape, approaching in many respects, that of an ill-formed cart-horse." The extreme coarseness and size of the northern short-horns, led to the introduction of Norman, or Alderney bulls probably at some period of the last century.

There exists in no other country so excellent a breed of cattle as those of this true sort, including all the useful properties. In one, perhaps, the most important respect, great milking, they are even without rivals: their beef is finer than that of the old short-horned breed, and they fatten much earlier and quicker, conveying still a vast depth of natural flesh, and tallowing within in the first degree. They have both speed and strength enough for labour, and their shoulders are well formed and well pointed for draught. Being beautifully variegated in colour, spotted, striped, sometimes *sheeted* red and white, they make fine park stock. From their superior quantity of milk, they rival the best long-horns in the cheese and butter dairies, and for suckling are unrivalled. It may be presumed, they are at least equal to the Herefords in the stall in all points; and there seems but one respect in which they are, in any considerable degree, inferior to any breed which can be named, which is fineness of flesh: in which particular it is obvious, they can never equal certain other breeds, without the entire overthrow of their *Dutch* basis, by a repetition of the Norman or some similar cross which would go to destroy the present superior breed. An occasional mixture, however, of Norman blood may keep the Holderness stock sufficiently fine, and prevent its degeneration on the other side: or a selection might be made of very elegantly shaped and fine-boned cows, with the view of improvement. These true sorts are well known as the stock generally kept by the London cow-keepers. They have small short horns somewhat in the shape of a half ring, rather a long plain head, fine skin, legs seldom too long, the carcase large, but compact, good back and loin, the general figure rather square. They are not the kind of stock for short keep, however small their size: indeed they are known to be great consumers. It is necessary, however, that this high character of these cattle should be received with considerable reserve: it relates to the cows chiefly, and to a selection of the oxen to what they ought and might be, rather than what they generally are.

The first object, in respect to the improvement of the ill-formed part of such stock is, to shorten the legs, and this might be effected by a conjunction of the best Teeswater and other good bulls with 'properly' selected short-legged cows. It is thought "that the best and quickest feeders of this breed are not remarkable for milking. The Tweed side short-horns are a valuable variety of the Teeswater kind."

It is also believed, that "the Northern *half-long-horns* are the immediate produce of a conjunction of the long and short-horns, which must, of necessity, frequently happen upon, and in the vicinity of, those mountains which separate the native district of the two kinds. The horns of this variety generally run out pretty straight and even, unlike those which are called middle or wide horns. They are a large and long breed of cattle partaking equally, as may be supposed, of qualities of each sort, and thence ought to be good dairy cattle as uniting quality and quantity of milk with size. They are not so permanently established, and generally known as their originals."

Many of this kind of cattle are very perfect in their nature, being more fine in the chap, with less coarseness under the neck than most other sorts, but they sometimes stand a little high in the leg, and are occasionally rather thick in the shoulders; in flesh they are weighty, with a full chine, the hucks are large, and the rump and loins heavy, though somewhat short. In consequence of their large size, they demand good keep and proper length of time in feeding; but though the beef of them be thought by some to be more coarse, and not so well marbled as in some other breeds, they very commonly die fine in the quality of it; and it having the excellent properties of being very juicy, and taking salt well, greatly fit it for the purpose of provisioning our ships. They are therefore, in suitable situations, probably, a

most profitable and advantageous sort in some points of view.

The cows, though in common such deep milkers, when not employed in that way, become readily in the fat state, paying well for their keep; this is particularly the case in some of the more improved sorts.

The value of this kind of cows is now beginning to be better known, and more in demand for the butter dairies than has been hitherto the case, as they are found to give so much larger quantities of milk than other sorts; which besides being used in this way may be turned to much account in the support of a larger number of hogs, as though more butter may not be given soon after dropping the calves, there is a much longer continuance of it, which is a great advantage, as the consumption of food is not very materially different.

Teeswater Improved Sort.—The Teeswater or Durham improved variety of the short-horned breed of cattle has much resemblance to the best of the other sort, but is larger and much heavier, being a well-made, thick, and weighty sort. It is a variety, which is capable of rising to a great size and state of perfection, as is proved by the celebrated great ox which was exhibited in different parts of the kingdom, which was of this kind, as well as by many other instances of extraordinary size and dimensons. The bulls and oxen of this sort come at an early period to fifteen or sixteen score the quarter, being in some cases nearly all white with black spots: but they will not ripen and fatten so well as the long-horned sort, unless they are well fattened they will not fetch so much from the butcher, as in the half-fed state, they are somewhat coarse and unkindly in their nature.

They are a sort which are very fine handlers, and which have a great disposition and aptitude for taking on fat at an early period. Their colour is commonly red and white, or white with a little red or roan about their necks. They are a variety of short-horned cattle which have great value, utility, and advantage in different cases.

There are many instances of these cattle rising to very great weights, as from from 150 to 168, and even 200 stones; affording from 11 to 16 stones of tallow and upwards, and weighing in the hides from 9 stones to 9 stones 11 pounds.

Yorkshire Polled Sort.—The Northern or Yorkshire polled cattle have the same qualities as the short-horned, carrying vast substance; and some attaining great size, although in that particular they are most conveniently various. In the opinion of some they are a most excellent breed, and will merit improvement with the view of labour, by a selection of the finest boned and most active individuals. From the shape of these polled cattle they hold a strict affinity it is supposed in all respects with the short-horned, amongst which they are found; and it seems that various breeds of horned cattle are attended with hornless, but perfectly congenial, varieties.

The excellence of these polled cattle is shewn by the fine crown-pointed tops of the heads, which should be particularly regarded in selecting the bulls, as indicating disposition to fatten, and tending to give more of such a state in the foreheads of them, by which a similarity is the most likely to be afforded in their produce, as it is constantly noticed, that where there is any mark of a bullish kind in such parts of cows, it is a certain indication of their being very deficient milkers. Some of this as well as the other sorts have the fault of having extremely thin hides, but which is often a sign of long continued milkers under good keep. Being large, they demand better food, and more time in bringing them to the proper state than many other breeds and varieties, and they should not be fed off at too early a period. They are much in request as cow stock, by cow-keepers, for milk in the metropolis, and some other places, where they are found to answer in the most perfect manner, as giving very large quantities of milk for a considerable length of time.

Dutch Lyrey Sort.—The thick, large, clumsy, fleshy-thighed Dutch variety of this breed, is a sort not adapted for fatting, mostly of a red colour, with white faces, and horns much like those of the Herefordshire variety of the Devonshire breed. They appear a hardy, healthy, and well fleshed kind, with small tails, but which are never capable of being made fat, and are, of course, improper as neat cattle stock in any point of view.

Within the last thirty years, the short-horned cattle have undergone such vast improvement, that they are now become a desirable and important sort of stock in many places, where they could not before be employed.

[From the American Turf Register.]

VETERINARY.

Observations on the disease commonly called the Big Head in Horses.

I observe in a late number of your interesting Register, a short article upon the Big Head in horses, in which the writer supposes the disease to be in the teeth. A friend of mine, lost some months since, a very fine horse with that complaint, and was kind enough to have the head carefully cleaned and sent to me. I had intended sending it to you, but during an absence from home, it was thrown away. It had, however, been carefully examined before, with the aid of two intelligent physicians, both of whom pronounced the disease scrofula.

I subjoin the result of the examination, from notes taken at the time.

That part of the temporal bones which extend low into the temporal fossa, and immediately opposite the lower part of the zygomatic arch, was extremely thin, and in places worn through or consumed, so as to leave the brain at those places without a bony covering, but otherwise those parts had no appearance of disease. So the interior bony case of one of the orbits, immediately above the upper part of the superior maxillary was defective, with parts removed, but this had the appearance of an accident, probably in cleaning the head.

The superior maxillary bones were much diseased, their upper ends immediately below the orbits, were entirely spongy, much consumed, and the usually hard enamelled surface of the bones completely wanting there; and throughout the whole extent of the grinders, the bones were spongy and evidently had been much absorbed, so as to give to the exposed part of these teeth an unusual length. The progress of the disease appeared to have been very rapid in these parts as the teeth were not the least discolored, below the well defined dark line of the original extent of the bone.

That part of the maxillary which lies below the orbital foramen, forming both cheeks, and in a space of from two and a half to three inches long, by about two inches wide, was rough, spongy and much absorbed, so that the roots of the teeth were without any exterior covering, being exposed from a quarter to half an inch. These were the roots of the two most forward grinders in each maxillary, they extend as far into the maxillary as the foramen (infra-orbital foramen) and in the usual position of a horse's head may be considered as below that foramen.

The inferior maxillary, into which the upper incisor teeth enter, was also very spongy and much absorbed, but those parts of the maxillary into which the canine teeth enter, was apparently sound and free from disease.

The whole of the superior maxillary was much diseased, but those parts which indicated the disease in the greatest degree, were as before stated, adjacent to and below the orbital foramen. The parts immediately adjacent to the teeth, alveolar parts, both inside and out were spongy from a quarter to half an inch in width, and the upper ends of the maxillary, immediately below the orbits and adjacent to the foramen, leading from immediately below the orbits into the nasal opening. The spongy condition of the bone was extensive and deep in these parts, and much absorbed so as to leave a large opening into which a finger could have been thrust into the cavity behind the malar bone.

The lower jaw was not with the upper, I cannot therefore speak of its appearance, but I have no doubt it was healthy, as otherwise it would not have escaped the attention of the observing and intelligent gentleman who brought me the upper. In fact, he remarked to me that the lower jaw had no evidence of disease.

All the remedies for this complaint tend to one single object, to excite superficial inflammation near the seat of the disease, and when applied in time, have, I have understood, in some cases, been successful. But when the complaint has been neglected for some time, I believe it is without a remedy, although, in many cases, its progress is extremely slow.

The scrofula in the human subject is considered a constitutional disease, and as being liable to be transmitted to one's posterity. It is also considered as frequently resulting from breeding too much in and in. I can see no reason why these suppositions may not be applied to the horse—of one fact I am well satisfied, that the Indians who breed very much in and in, have this complaint frequently among their horses.

May it not then be advisable to avoid breeding from a stock subject to this complaint, and also to avoid breeding too much in and in, by which the complaint may be produced?

There are other diseases which have been found to be transmitted by a horse to his progeny, such as "stinking feet," and defective hoofs. Ought not such stocks to be avoided by a breeder?

Of what avail is an undisputed line of illustri-

ous ancestors, if a horse's feet are always to be nursed? He is neither a good roadster nor racer. Rarely running well, and never long, and always complaining when he treads on a firm path.

Should not these defects be avoided by breeders, and should they not be as careful in observing the general constitutions of a horse's issue, as the blood and performance of the sire.

Such observations appear to me essential to the consideration of all breeders, and if duly attended to, may prevent a general diffusion of constitutional diseases.

THE GARDENER.

MARYLAND HORTICULTURAL SOCIETY—NOV. 15.

Mr. Joseph King, jr. exhibited the following varieties of Chrysanthemums, viz. Early crimson, quilled flame yellow, superb yellow, Park's small yellow, quilled yellow, dark crimson, pink, orange, large buff, expanded white, paper white, large quilled pink, and mahogany colored, 13 varieties, all fine.

Mrs. John Lester exhibited 6 fine varieties of Chrysanthemums, viz. Paper white, large white quilled, French yellow, small yellow, pink, and orange colored.

Mrs. George H. Keerle exhibited 34 varieties of Chrysanthemums, viz. Claret or early crimson, French yellow, large new buff, variegated, crimson, golden lotus, paper white, quilled white, curled lilac, cluster yellow, pink, pale purple, large quilled pink, superb yellow, orange, lemon, tasselled lilac clustered, dark red or china aster, Park's small yellow, Spanish brown or mahogany, expanded white, tasselled white, early blush, quilled yellow new, two colored incurved, daisy white with yellow centre, large quilled buff, two colored red, quilled flame yellow, pale tasselled lilac, black ranunculus, curled pink, tasselled purple, yellow waratah, sulphur yellow, and large lilac, all very fine.

Mr. I. I. Hitchcock exhibited two fine specimens of mangle worzle, and one large white flat turnip, raised by capt. Matthews, of Chestertown; and two fine specimens of Dale's new Hybrid turnip, raised by Mr. C. Smith, of Georgetown, D. C. The Dale's hybrid turnip is undoubtedly a valuable acquisition, both as food for stock and as a culinary vegetable.

[From Bridgeman's Young Gardener's Assistant.]

GARDENER'S WORK FOR NOVEMBER.

Endeavour to avoid having your garden products frozen fast in the ground. Begin in good earnest to secure them; in fine weather dig up Beets, Carrots, and as many Parsnips, Skirret and Salasfy roots, as will be required for winter use, and pack them close together in graves; give them a coat of straw, and afterwards heap on as much earth as will keep out the frost, or stow them in a cellar. Towards the end of the month Turnips may be secured in the same way. Take up Celery in dry weather, and strike it in close together against a ridge which should be previously formed in a straight line about a foot above the level of the surface; throw up earth from the trench sufficient to cover them about an inch, and then plant row after row as close and upright as it can be placed, with just sufficient earth between every row to keep the roots and stalks from touching each other. The whole being covered up with earth, some long dung or litter may be thrown over it sufficient to keep out the frost, and by heaping a good layer of manure against the last row of Celery, it may be taken out at any time in the winter for use. Some erect a board shed over to preserve it from wet, or a small quantity may be kept in a cellar. Cabbages must be taken up and laid in rows against a ridge, so as to form a square, compact, close growing bed, the roots and stems being buried up to the lower leaves of the Cabbages. The beds may be afterwards covered with straw, or a temporary shed may be erected over them. Cabbages will keep for some months in a cellar, if connected with their roots. Borecole, Brussels Sprouts, and Collards, may be taken up and stowed away like Cabbages. Cardoons may be laid in like Celery, or preserved in sand in a cellar. Leeks may be taken up and laid in rows close together against a ridge, and covered up as far as the lower leaves. If the last row be protected from frost by a coat of stable dung, they can be taken out when required for use. Corn Salad, Spinach, and Lettuce, may be protected by a covering of straw, salt hay, or cedar brush.

Cover up flower bed with leaves, straw, or light litter. Plant Tulips, Hyacinths, and other bulbous flower roots. Protect all tender plants. Hardy fruit trees may be planted this month; lay long litter round the roots of them, and also of the grape vines and other teader plants, trees, shrubs, &c.

[From the Providence Journal.]

MANUFACTURE OF SILK.

Yesterday afternoon, we rode out to the Rutenburg, about a mile and a half from this city, near Olneyville, to witness the operation of the silk machinery, recently invented by Messrs. Gay and Mosely, of Connecticut, where we found a small silk manufactory, just going into operation. Repeated attempts have been made from time to time to manufacture this material in this country, but they have all hitherto failed, owing to the imperfection of machinery. The great difficulty has been in the outset in reeling the silk from the cocoons. The material in its raw state contains a glutinous substance of a very adhesive character, and in the ordinary mode of reeling the threads would adhere so that the skeins could not be wound off from the reel without great care and at best very essential injury to the thread. Another impediment has been that in spinning, the fibres of the thread were liable to be broken and fretted up by the friction of the machinery through which it passed. These imperfections have been entirely remedied in Gay & Mosley's machinery, and the silk passes through all the processes of manufacture from the cocoon to the loom, with all the rapidity and security from injury, with which cotton is manufactured. The machinery is very simple, but very ingeniously contrived, and is worthy the observation of every friend of domestic industry. The improvement in this machinery, by which the adhesion of the thread on the reels and spools is prevented, consists in a transverse motion, by which the thread is carried rapidly from one side of the skein or end of the spool to the other, so that instead of lying parallel, the threads lie at angles across each other.

On our return we called to see the Donnelson farm which has recently been purchased by an association of gentlemen for the purpose of growing silk. They are now in the progress of transplanting 15,000 mulberry trees, already four years old, on one of the most beautiful spots of earth in this vicinity. These trees were originally planted for ornamental trees, at the garden of the Messrs. Dyers, which has lately been known by the name of "Mulberry Grove," and although the country did not seem to demand quite so large a supply of ornamental trees of that kind, the inventions of Gay & Mosely have rendered them exceedingly valuable, and probably one of the most lucrative sources of income that New England now affords. All who have tried the experiment agree that the growing of silk yields an enormous profit on the capital employed, and as it may be grown without difficulty in every family in the country, we cannot doubt that it will soon become the great staple of the New England states.

[From the Gardener's Magazine.]

ON THE CULTIVATION OF POTATOES, *the Cause of the Curl, and the Manner of keeping and preparing the Sets.* By W. M.

On reading the observations on planting potatoes, by J. Hart of Dublin, it struck me that, if every one would communicate the results of his own practice as a potatoe-grower, it would elicit facts from which correct data might be obtained that would enable horticulturists to determine generally what are the real causes of failure in the cultivation of that valuable vegetable.

Much has been said on the curl in potatoes, and many reason have been assigned as to the cause of it; but most of them are unsatisfactory, being often directly opposed to every day's experience. Perhaps my ideas on the subject may be as vague as those of my predecessors; but, be that as it may, I have the satisfaction of knowing that, by attention to the rules here laid down, I have never failed of success.

I shall begin with the most prevailing idea, that the curl is occasioned by the over-matured state of the tubers from which the plants were taken. This is a point on which I differ from some who rank high as vegetable physiologists; but, always judging for myself according as circumstances have occurred, I am induced to believe that much more importance is attached to the cause than it really deserves. That it is possible for potatoes to be over-matured, I admit; but it will only occur in those seasons that are exceptions to our summers, generally considered.

During the last twenty years I have been extensively connected with the culture of potatoes on various soils, and by many different methods, both for early and late crops; and, though I have never suffered from an attack of the curl, I have in many instances seen the crops of those around me suffering to a great extent during that period. I will describe my practice in as few words as possible. For early crops I always plant tubers produced from an early crop the preceding season, in preference to those of a later growth. I con-

sider tubers well matured preferable for planting, because in them the embryo of the future plant is more perfect than in those not yet arrived at a state of maturity; and, consequently, the functions of the plant are brought more readily into action by the three great agents of vegetation, light, heat, and moisture, than in those of later growth. The well keeping of potatoes intended for planting is a very material point as respects the curl in the future crop. I hesitate not to say that the curl is often caused by the injudicious manner in which potatoes are frequently stored through the autumn and winter months. We often see them thrown into large heaps, and suffered to remain till young shoots appear through the top of the heap. They are then perchance turned over, to rub off the young shoots, and again consigned to chance till another crop of shoots appear. Indeed, I have known instances where three successive crops have appeared before the time for planting had arrived. Under these and similar circumstances, we have no reason to expect a healthy growth and good crop; it is quite impossible that plants, with their vegetative powers thus nearly exhausted, can fully develope their respective parts; and hence those monstrosities, contortions, and contracted appearances of the stem and foliage, which end in disappointment to the grower. It is not to be inferred that I consider this as the sole cause of the curl in potatoe crops; on the contrary, I believe that there are others; but these appear to me of a secondary nature, and I may at some future time address you respecting them, should you deem the hints here thrown out worth attention.

My method of keeping potatoes for planting is this:—I lay by well-matured tubers of my earliest crops, in a dark dry shed, frequently turning them over, to prevent them from sprouting; which by proper attention may be effectually done. They will retain their vegetative powers unimpaired. When the season for planting arrives, I cut my sets in the following manner: first, I cut off the blind eye, as it is generally called, at the base of the potatoe, and throw it into the waste basket; I then proceed to divide the remaining part, according to the size of the tuber, and the number of eyes it contains, always taking care to have one good full eye at least to each set; and when the sets are cut, I lay them in a moderately thick heap for a few days, that they may dry before planting, taking especial care, in early crops particularly, not to plant when the ground is very wet from heavy rains or snow.

I have frequently taken tubers from fully matured crops, and exposed them to the influence of the sun for several weeks; and in the following season planted them at the some time, and on the same piece of ground, with tubers of a late crop; the results have fully confirmed my opinion, that planting early-produced tubers, for early crops, is the best method to adopt.

Respecting the idea that late-produced tubers will not produce a curled progeny, I submit the following case, to show that they are as likely to produce curl in the suceeeding crop as the most matured tubers. In the year 1826, through the prevalence of rain, the late crops were generally not of a marketable quality; consequently the greater part were reserved by the growers for planting. The following spring and summer, the curl prevailed to a great extent, and hundreds of acres were ploughed up, the crop not being worth the expense of taking. I examined many hundreds of plants on different soils under different modes of treatment, and seldom formed more than three or four per cent of healthy plants. On carefully examining the soil, I found nothing to induce a belief that it was caused by any local circumstance; indeed, so general was the disease, that the most sceptical growers declared they could not ascribe it to any other cause than the unripe state of the sets; a conclusion strengthened by the fact, that those who planted well-ripened tubers had crops free from curl and as productive as usual.

East Ham, Oct. 28, 1833.

All the Squashes.—If Thanksgiving in Massachusetts go not off with *eclat*, this year, it will neither be for the want of a good proclamation (Governor Davis has written a pattern one for the occasion,) nor for lack of squashes; which every body knows are converted into what is by a figure of speech called *pumpkin* pies. We have newspaper authority for stating, that one acre and a quarter of land in Roxbury, produced, during the past season, *sixteen tons* of squashes of a superior quality! Roxbury has probably outsquashed every town in christendom.

MISCELLANEOUS.

Workingmen.—The following extract from a late address of Dr. Mitchell, of New York, is particularly recommended to workingmen. The dignity of human nature belongs to us all alike. It is education, it is the cultivation of the mind as well as the improvement of the bodily powers, which make the man.

"That I have a very sincere desire to improve and exalt the condition of the working classes, cannot now I suppose be doubted by any of you. I have labored long enough, too, among the dust and smoke of a laboratory to feel myself entitled to the appellation of a workingman; and while so engaged, have not been able to perceive any necessary connection between manual labor and degradation; any essential disjunction of the work of the hands from that of the head; any law of nature which should make impossible or even difficult, an alliance of good manners, high morals, and elegant accomplishments, with the active duties of the mechanic. On the other hand, I constantly perceive the immense value of all these things to the workman. He cannot bring superfluous talent to his work, however simple habit may make it appear; and in his dealings with his customers on one hand, and his workmen or fellow-laborers on the other, he will unquestionably find educated politeness, and habitual self-possession, the means of wealth and sources of affection and obedience."

Optical Experiment.—Place on white paper a circular piece of blue silk, about four inches in diameter, place on this a circular piece of yellow three inches in diameter, on this a circle of pink, two inches in diameter, on this a circle of green, one inch in diameter, on this a circle of indigo, half an inch in diameter, making a small speck with ink in the centre—look on this central spot steadily for a minute; and then closing your eyes and applying your hand at about one inch distance before them, so as to prevent too much light passing through the eyelids, you will see the most beautiful circles of colors the imagination can conceive, not only different from the colors of the silks we have mentioned, but the colors will be perpetually changing in kaleidoscope variety as long as they exist.—*London Courier.*

Horses.—Caution.—Mr. Beeson, veterinary surgeon, of Amersham, being called to examine two very fine horses that had died suddenly without any apparent cause, discovered in the stomachs, some portion of yew tree, which it seems the horses, having stood under the tree, had eagerly eaten. The poison was surprisingly rapid in its effects. They were three and five years old that died, and could not have been estimated at less 50*l.* or 55*l.* the two.

There were no symptoms of the kind observed before they fell; the driver says they went very well, and only staggered a few paces, dropped, and before the harness could be taken off they were dead. They died in about three hours after eating the yew. Cattle and sheep are equally affected by this poison.

To prevent Milk becoming Sour.—To prevent milk from turning sour and curdling, as it is so apt to do in the heat of summer, the men of Paris add a small quantity of subcarbonate of potash or soda, which saturating the acetic acid as it forms, prevents the coagulation or separation of curd; and some of them practice this with so much success, as to gain the reputation of selling milk that never turns. Often when coagulation has taken place, they restore the fluidity by a greater or less addition of one or the other of the mixed alkalies. The acetate which is thus formed has no injurious effects, and besides, milk contains naturally a small quantity of acetate of potash, but not an atom of free or carbonated alkali.

Mechanics' Mag.

Mr. Aaron Curtis, of Ithaca, New York, raised the past season on a quarter of an acre of land, in the village, the following articles: 100 bushels of

Onions, worth 75 cents per bushel.	$75
50 do. Beets, do. 50 do.	25
700 heads of Cabbage worth $4 per hundred.	28
Lettuce, worth	10
Top Onion Seed, worth	5
	$143

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Universal Education, and Teachers' Lyceum of Baltimore—Preserving bees in winter—On the use of Steam in Agriculture—On Peas—Short Horned breed of Cattle and Sorts—Big Head in Horses—Horticultural Society's report—Gardener's work for November—Silk Manufacture—Cultivation of Potatoes, cause of curl—Great crop of Squashes—Workingmen—Optical experiment—Horses poisoned by the Yew tree—To prevent milk from souring—Great product of a "rood of ground."

BALTIMORE PRODUCE MARKET.

☞ *These Prices are carefully corrected every* MONDAY.

	PER.	FROM	TO
BEANS, white field,	bushel.	——	3 00
BEEF, on the hoof,	100lbs.	4 50	5 25
CORN, yellow,	bushel.	70	74
White,	"	74	74
New,	"	60	67
COTTON, Virginia,	pound.	13	14
North Carolina,	"	12	15
Upland,	"	15½	16½
FEATHERS,	pound.	37½	40
FLAXSEED,	bushel.	1 50	1 62
FLOUR—Best white wheat family,	barrel.	6 25	6 75
Do. do. baker's	"	5 75	6 25
Do. do. Superfine,	"	5 00	5 25
Super Howard street,	"	5 12	5 25
" " wagon price,	"	5 00	——
City Mills, extra,	"	5 12	5 25
Do.	"	5 00	5 12
Susquehanna,	"	5 25	——
Rye,	"	——	——
GRASS SEEDS, red Clover,	bushel.	5 00	5 50
Timothy (herds of the north)	"	3 00	3 50
Orchard,	"	3 00	3 50
Tall meadow Oat,	"	2 00	2 50
Herds, or red top,	"	1 25	——
HAY, in bulk,	ton.	——	17 00
HEMP, country, dew rotted,	pound.	6	7
" water rotted,	"	7	8
HOGS, on the hoof,	100lb.	4 87	5 12
HOPS—first sort,	pound.	15	——
second,	"	13	——
refuse,	"el.	11	——
LIME,	bush	30	33
MUSTARD SEED, Domestic,	"	5 00	6 00
OATS,	"	30	33
PEAS, red eye,	bushel.	60	——
Black eye,	"	85	——
Lady,	"	100	——
PLASTER PARIS, in the stone,	ton.	——	3 00
Ground,	barrel.	1 37	——
PALMA CHRISTA BEAN,	bushel.	1 50	1 56
RAGS,	pound.	3	4
RYE,	bushel.	67	69
TOBACCO, crop, common,	100 lbs	4 00	5 00
" brown and red,	"	5 00	7 00
" fine red,	"	7 00	9 00
" wrappery, suitable for segars,	"	6 00	12 00
" yellow and red,	"	8 00	12 00
" yellow,	"	13 00	17 00
" fine yellow,	"	15 00	25 00
Seconds, as in quality,	"	3 50	5 00
" ground leaf,	"	5 00	9 00
Virginia,	"	4 00	——
Rappahannock,	"	——	——
Kentucky,	"	4 00	9 00
WHEAT, white,	bushel.	1 05	1 13
Red,	"	1 00	1 03
WHISKEY, 1st pf. in bbls.	gallon.	32	33
" in hhds.	"	——	30½
" wagon price,	"	28	28½
WAGON FREIGHTS, to Pittsburgh,	100 lbs	——	1 50
To Wheeling,	"	——	1 75
		washed.	*unwash*
WOOL, Prime & Saxon Fleeces,	pound.	50 *to* 60	24 *to* 26
Full Merino,	"	44 50	22 24
Three fourths Merino,	"	37 44	22 24
One half do.	"	33 37	22 24
Common & one fourth Meri.	"	30 33	20 22
Pulled,	"	31 33	22 24

PUPPIES.

SEVERAL YOUNG POINTERS of the very best blood, will be old enough for sale, early in November. Also several young GREY HOUND sluts, from the pair sent from Europe to the president of the U. S., and by him presented to this establishment last fall.

Also one SLUT, one year old, from my grey hound slut, by a very fine imported Pointer. She appears to have the Pointer's nose and the shape and agility of the greyhound—color black. Oct. 7.

BALTIMORE PROVISION MARKET.

	PER.	FROM.	TO.
APPLES,	barrel.	$2 50	$5 00
BACON, hams,	pound.	11	——
Shoulders,	"	——	10
Middlings,	"	——	10½
BUTTER, printed, in lbs. & half lbs.	"	25	37
Roll,	"	15	25
CIDER,	barrel.	——	4 00
CALVES, three to six weeks old	each.	4 00	7 00
COWS, new milch,	"	22 00	30 00
Dry,	"	9 00	12 00
CORN MEAL, for family use,	100lbs.	1 56	1 62
CHOP RYE,	"	1 56	1 62
EGGS,	dozen.	19	20
FISH, Shad, salted,	barrel.	5 75	6 00
Herrings, salted, No. 1,	"	4 75	——
Mackerel, No. 1, 2 & 3,	"	4 87	6 75
Cod, salted,	cwt.	2 50	3 00
LAMBS, alive,	each.	1 25	2 00
Slaughtered,	quart'r	31	50
LARD,	pound.	10	12
ONIONS,	bushel.	62	75
POULTRY, Fowls,	dozen.	——	2 50
Chickens,	"	1 75	2 00
Ducks,	"	——	2 50
POTATOES, Irish,	bushel.	45	56
Sweet,	"	62	75
TURNIP,	"	50	56
VEAL, fore quarters,	pound.	7	——
Hind do.	"	8	——

ADVERTISEMENTS

WESTPHALIA GEESE.

A FEW pairs of these very superior Geese will be ready for delivery in a few days at $5 a pair. Apply to I. I. HITCHCOCK,
no 18 Amer. Far. Estab.

WHITE TURKIES.

I HAVE now ready for sale several pairs of these truly beautiful fowls, at $5 a pair, they are of this year's crop. I. I. HITCHCOCK,
no 18 American Farmer Establishment.

WOOL.

LYMAN REED & CO. Commission Merchants, No. 6 S. Charles street, Baltimore. Md.—devote particular attention to the sale of WOOL. All consignments made them will receive their particular attention, and liberal advances will be made when required. May 9.

AGENCY FOR TREES, &c.

THE subscriber respectfully offers his services to his customers and the public generally, as agent for the procurement of Fruit and other Trees. It may not be generally understood or duly considered, that few nurseries contain *all* kinds of trees in equal perfection. One, for instance, is celebrated for its fine apple trees, another for its peaches, and a third for its plums or pears, while scarce any of them can make up a collection of *all kinds* of trees of the best quality. In this respect the subscriber flatters himself that he possesses peculiar advantages. His own nursery is not extensive or forward enough to afford many trees for sale yet, and his acquaintance with nearly all the most eminent nurserymen in this country, and of the peculiar excellencies of their respective establishments enables him to select from them all, probably a better collection of fruit trees than any one of them can furnish. Trees ordered from any particular nursery, or to be selected by me, will be charged at nursery prices and 10 per cent commission added. Orders ought to be forwarded immediately, and all confided to the subscriber's agency shall receive his best attention.

I. I. HITCHCOCK,
Oct. 14. Amer. Farmer Establishment.

BAKEWELL RAMS.

TWO Bakewell Rams of good size and quality, for sale by a farmer near Baltimore at $20 each. Apply to I. I. HITCHCOCK,
oc 28 American Farmer Establishment.

BULBOUS ROOTS.

HYACINTHS, Tulips and a general assortment o Bulbous Roots, suitable for the present season, for sale low at this establishment by
Oct. 28. I. I. HITCHCOCK.

FRUIT AND ORNAMENTAL TREES.

THE subscriber has now for sale, at the Bartram Botanic Garden and Nursery, near Philadelphia, a very extensive assortment of the finest ORNAMENTAL TREES, of all sorts suitable for planting in streets or avenues.

FRUIT TREES, of every good variety.
Hardy Flowering Shrubs and Evergreens.
Herbaceous Plants, Bulbous Roots, &c.
MEXICAN DAHLIAS, of 276 varieties.

ALSO,

A very large collection of the finest GREEN HOUSE PLANTS, including upwards of 1000 Camellia Japonicas of 80 varieties, 5000 Roses of 250 varieties, (chiefly new and hardy sorts,) 2000 Geraniums, of 130 varieties, with every other sort of plants usually cultivated for sale; all of which will be disposed of at moderate prices, and a liberal discount allowed to gardeners or others, who buy to sell again.

Collections of AMERICAN SEEDS or PLANTS put up for Europe, or elsewhere, in such manner as to ensure their safe transportation.

Orders per mail, or left at the store, No. 21 Philadelphia Arcade, will be promptly attended to, and plants carefully packed and forwarded agreeable to directions to any part of the United States. Address

ROBERT CARR,
nov 4. 4t. *Kingsessing.*

PEA FOWLS.

ONE pair 2 years old, and one pair 3 years old, for sale at this establishment. Price $3 a pair. no 4

ORCHARD GRASS SEED.

A few bushels just received and for sale by the subscriber, at $3 per bushel. I. I. HITCHCOCK,
no 4 American Farmer Establishment.

MORUS MULTICAULIS.

THE subscriber has on hand a few hundred of this celebrated Tree, unrivalled in the quality of its leaves as food for the silk worm, for which he is ready to receive orders (accompanied by the cash) with *particular* directions for the delivery of the trees on or after the first of Nov. next. Price 50 cents each, $5 per dozen, or $40 per hundred.

The success and ease with which this tree is propagated, the extraordinary quickness of its growth, the superiority of its leaves over *all* others for the silk culture, and its uncommon luxuriance and beauty, altogether recommend it to the favourable notice of *every farmer* as a most valuable acquisition. I. I. HITCHCOCK,
aug. 26 Amer. Far. Estab.

WANTED,

AT the American Farmer Establishment, ORCHARD GRASS SEED, for which the highest price will be paid; also, CLOVER SEED and TIMOTHY SEED will be either bought or sold on commission, by
Sept. 16. I. I. HITCHCOCK.

TERMS OF THIS PAPER.

1. Price five dollars per annum, payable in advance. ☞When this is done, 50 cents worth of any kind of seeds on hand will be delivered or sent to the order of the subscriber with his receipt.

2. The *manner* of payment which is preferable to any other for distant subscribers, is by check or draft on some responsible party here, or else by remittance of a current bank note; and to obviate all objection to mail transmission, *the conductor assumes the risk.*

3. Subscriptions are always charged BY THE YEAR, and never for a shorter term. When once sent to a subscriber the paper will not be discontinued (except at the discretion of the publisher) without a special order, on receipt of which, a discontinuance will be entered, to take effect AT THE END of the current year of subscription.

4. Subscribers may receive the work either by mail in weekly numbers, or in monthly or quarterly portions; or else in a volume (ending in May annually), handsomely pressed, half bound and lettered (to match with the American Farmer) by such conveyance as they may direct: but the $5 must in all these cases be paid in advance.

☞ADVERTISEMENTS relating to any of the subjects of this paper will be inserted once at one dollar per square, or at that rate for more than a square, and at half that rate for each repetition.

THE FARMER & GARDENER;

AND LIVE-STOCK BREEDER & MANAGER.

CONDUCTED BY I. IRVINE HITCHCOCK, AND ISSUED EVERY TUESDAY FROM THE AMERICAN FARMER ESTABLISHMENT, AT $5 PER ANNUM, IN ADVANCE

No. 30. **BALTIMORE, NOVEMBER 25, 1834.** **Vol. I**

☞This publication is the *successor* of the late
AMERICAN FARMER,
(which is discontinued,) and is published at the same office, at five dollars per year, payable in advance.
☞When this is done, 50 cents worth of any kind of seeds on hand will be delivered or sent to the order of the subscriber with his receipt.

American Farmer Establishment.

BALTIMORE: TUESDAY, NOVEMBER 25, 1834.

Extract of a letter to the Editor, dated
DARDENNE, Mo. 26th Oct. 1834.

I discover from occasional remarks in the editorial department of your paper, that the frost which was so destructive here last spring, has been general throughout the country. The entire crop of fruit, both native and exotic, was destroyed here on the 27th April, from which time the weather became dry, and continued frosty until the 15th May; it then became warm, but continued dry until 19th June, from which time until the 2d July, excessively wet; it then set in dry again and most intensely hot, and continued of that character with but little variation until the 1st Sept. when the heat mitigated a little, but continued dry until after the middle of that month, when light occasional showers commenced falling, and the weather continued of a growing character until recently, when we have had some pretty severe frosts, which have destroyed tender vegetation.

The wheat crop of this season is perhaps the best that has been produced here in the last fourteen years, the most of it perfect as to quality.—The oats crop a tolerable though not a full one; the corn crop is greatly below an average one, ranging perhaps a little over half an average one; the vegetable crop exceedingly poor, many articles in that line having failed in toto, and particularly the turnip crop. The western and southwestern parts of this state have been much more seasonable, and the crops of all descriptions are very fine, but from about fifty miles west from this place, eastward and across the entire state of Illinois, and part of Indiana, the drought has been pretty uniformly severe. Between the 3rd July and the 17th Sept. we had but one shower of rain sufficient to lay the dust, and that was a hasty thunder squall, when it rained pretty hard for about twenty minutes on the 28th July, but the ground was so hot it almost converted it to steam as it fell, and the ground was apparently as dry as ever in three days.

From the peculiar character of the season this state has been unusually sickly the present season, and the sickness peculiarly fatal. The prevailing disease has been bilious fever in almost all of its modifications, but the form in which it has been most fatal was that in which the attack commenced with irritability of the digestive organs; the disease when it commenced in this form, or when it assumed this form at a subsequent stage, generally terminated fatally in three or four days. The country has now become pretty healthy, though there are some cases of convalescence of rather long standing.

If it should not be considered out of season, I should like to communicate the results of a trial of two of the methods of managing and taking care of hay, which were recommended in the 15th volume of the American Farmer.

It will perhaps be recollected by all attentive agricultural readers of that paper, that it was recommended to farmers to put their hay in its green state or as soon as cut into small cocks, (as we western people call them,) and cure it by sweating.

When I commenced cutting my clover hay the present season, the prospect for favorable weather was flattering, but in a short time it changed and became evident that we should have a wet spell. I then dropped the scythes and set all hands to putting up the grass (then perfectly green but exempt from external wet) into cocks of about 200 lbs. cured hay, building them compact and high, to avoid the introduction of rain as much as possible; rain came on before I secured all the cut grass, but the next day was fair and I succeeded by unremitted attention in getting the water dried out of the remainder, and put it up in the same way. It continued rainy ten days, and afforded no opportunity to cure in the sun; the cocks were examined daily, by running the hand and arm into them, and contrary to all expectation, gave no indications of fermentation. At the end of ten days the weather became fair, the cocks were opened, and found to be in a perfectly sound condition, except so far as the rain had penetrated, and the external wetting alone in my opinion made it necessary to open them at all. Tell farmers they need not fear losing their hay on account of unfavorable weather at harvest. I have never seen worse weather in hay harvest, and I saved mine entirely well. It is most excellent hay.

The other method relates to taking up or gathering hay with the horse rake, and as I have not room in this sheet it will be communicated hereafter, in good time for the next harvest.

Yours, &c. JOHN SMITH.

[We beg leave to return our thanks to our correspondent for his attention, and to assure him that we shall be happy at all times to receive and convey to our readers his observations on practical husbandry. We shall await with solicitude the paper which he promises.]

NANSEMOND OFFICE, 19th Nov., 1834, } SUFFOK CO. }

To the Editor of the Farmer and Gardener:—

I enclose you $5 for the Farmer and Gardener, please send a receipt—will you or some of your valuable correspondents be so good, as to describe through the Farmer & Gardener, the proper mode of cultivating hops, from the beginning to the ending—what quantity of work they require, &c. Success to your paper.

Your friend and most ob't,
JOHN THOMPSON KILBY.

[We join our friend in the above request, that some gentleman, who is conversant with the hop culture, will give us his ideas on the subject.—*Editor.*]

MARYLAND HORTICULTURAL SOCIETY—NOV. 22.

Mr. Caleb Whittemore exhibited 6 fine Cape Brocolis.

Mr. Richard Vallentine exhibited 3 fine Cape Brocolis.

Mr. Joseph Pearson exhibited a white flat turnip, weighing 7 lb. 4 oz. raised by Mr. Mark Atkinson, at the "Highlands," 3 miles from Baltimore.

Mr. I. I. Hitchcock exhibited 6 blue skin Potatoes, raised by Mr. A. W. Ringgold, near Rock Hall, weighing together 7 lb. 4 oz.

MOLASSES FROM POTATOES.—The Cleveland (Ohio) Advertiser of August 22d, says, a small quantity of molasses was brought to this village last week from Medina county, manufactured from potatoes. Eleven quarts of thick molasses was procured from a bushel and three pecks of potatoes. The flavor is pleasant, and the article equal in every respect to West India molasses. The process of manufacturing is said to be simple, and not expensive.

THE FARMER.

[From the Farmer's Register.]

Extract of a Letter to the Editor on the Condition of Agriculture *in Virginia, and the Means for its Improvement.*

I am pleased that, in connection with others, you have succeeded in establishing some highly important truths which were formerly either not known, or entirely discredited, (it is lamentable that many should still be so slow to embrace them,) but which are now received by the more intelligent among the cultivators of the soil, as *agricultural axioms*, about which all doubt and discussion may cease; *axioms* that may be expressed in few words, and on the correctness of which any one, who chooses, may immediately and safely proceed to act. A few of these are—

That deep ploughing never need be dreaded.

A small farm well conducted is a source of greater revenue, than a large one indifferently managed.

It would be a vast amount of saving to the whole community, if every private owner were required to keep his stock from committing depredations on his neighbors, instead of imposing this onerous burden upon them.

The profits of agriculture (other things being equal) are in proportion to the attention paid to manuring; that is, as is the extent of the latter, so will be that of the former

The corn crop, with the stalk cut up from the ground entire, at a much earlier period than has usually been practiced, is worth about double what it is when gathered in the old way.

Prepared food of some kinds, and for some animals, will go nearly, if not quite, twice as far as that which is given in a raw and natural state.

The raising of tobacco need not impoverish the land, but it is only to the undue and disproportionate space that is alloted to this staple commodity that the mischief it is said to have produced, is attributable.

Other points of a similar nature, and of like importance, might be mentioned, but these may suffice as specimens. If I had time, I should regard it as a pleasing amusement to collect from your own, and other agricultural papers, a sheet or two of such short sententious sayings, which, when put together, I would style "The Farmer's practical Compend and Guide," which would serve as a manual to spread out before him, within a narrow compass, the results of agricultural experience and wisdom.

I have been also much gratified with the resolution you have manifested to grapple with prejudices of extensive prevalence and long standing, which oppose their obstructing force to the improvements you would introduce, and which seem, with some, to abide with a fixedness almost as firm as "the Ridge of Blue" on our west. But time must melt even *these*, if not *that* away. May yours be the honor and the achievement first to start them into motion that will be kept up till they shall be driven to "a returnless distance" from the "Old Dominion." To whatever other cause the low state of agriculture that is complained of in Virginia may be referred, it is certain to my mind, that it cannot, with the least shadow of propriety, be attributed to a deficiency in natural advantages. In these respects, as in the extent of her territory, she surpasses her proud sister, the State of New York. Her soil is as good, if not better—her water and land privileges for internal improvements, *on the whole*, about equal—her timber more valuable—her mines, as far as yet explored, more numerous and rich, and her climate, beyond all question, vastly superior. But still it must be admitted that she now falls behind in almost every thing that constitutes the wealth and strength of a commonwealth. An adequate cause for an effect so obvious, and so extensively experienced, must somewhere exist, and may be assigned. Without attempting to account for it altogether from the fact that slavery here exists, which, perhaps, would be taking a position that many would be disposed to controvert, it appears to me, that some other things may be mentioned, which are evils that more easily admit of correction, that are extremely injurious in their operation, and the removal of which should forthwith enlist the exertions of all who have influence, and who love "the land of their birth." Owing to existing institutions, and to the influence of immemorial custom in Virginia, it has happened, that nearly every thing relating to the cultivation of the soil, as mode, implements, &c. has been committed to the hands of slaves, or to white men whose ingenuity and knowledge (might it not without impropriety be said, whose ignorance and unskilfulness, *as a class?*) gave to them qualifications for their employment scarcely superior to those of the untutored negroes. The consequence is, that the *intellect* of this country has never been brought to bear on the interesting subject of agriculture. It has been diverted into other channels. Virginia has had her orators, and her professional men of eminence, but few of them have thought it worth their while to employ their intellectual energies on "the first and finest" earthly occupation of man; an occupation which opens a range most delightful, and of sufficient dimensions, to call into exercise the resources of the most expanded mind. If you, sir, can have success with your fellow citizens in directing *mind* and *thought* to the subject of agriculture in this State, it will flourish, and you will do much, perhaps more than any other man, for its ultimate prosperity and happiness. Would it not be advisable, (you will excuse me for the liberty I take in making the suggestion,) to endeavor by application to the legislature, or to private individuals of enterprise and public spirit, to put into operation a plan for the purpose of training suitable persons to the pursuits of agriculture, who should acquire themselves the information necessary for constructing agricultural implements, and using them dexterously, and who should be able to teach others the same? The disadvantages under which laborers perform their tasks, arising from bad implements, and, as appears to me, still more from their unskilful use of them, are incalculably great. It is difficult to do that adroitly which we have never *seen* done in this manner. To tell *how* it should be done is not enough. There must be the *practical* exhibition, or the lesson designed to be conveyed will not be learnt. Negroes, as all acquainted with them know, are exceedingly dull of apprehension at best. There seems to be an inversion of intellectual vision peculiar to the race, which presents right to their view as wrong, and wrong as right; and this characteristic trait seems as natural to them as it does to some persons to use their left hand instead of the other. I have seen the experiment tried, in a great number of instances, of using the rake to gather into a bundle for binding, the wheat that had been thrown in a row from the cradle, and I do not recollect to have ever seen a single negro who, when left to himself, did not begin and go on with the operation, with his feet treading against the heads, instead of the lower ends of the straw. The same awkwardness is seen in a thousand other things. Would it not be good policy in their owners to have them competently instructed in these matters? White men do not know how to labor themselves, or what amount of work a laborer ought to accomplish in a given time. To this cause, I am inclined to think, is owing a great deal of the laziness, and deceptive artifices so common to the negro race; hence the little that they accomplish in comparison with a dexterous European, or New England laborer, as those acquainted with the performances of each are well aware. Slave labor, if unproductive and unprofitable, is chiefly so, in my apprehension, because it is injudiciously directed, and unwisely managed. Much, therefore, I conceive, might be gained to the interests of agriculture in this country, were a suitable attention to be paid to implements, and to the qualifications and management of labourers. But I am happy to find that these topics have not escaped your notice, and hope that your useful publication will hereafter pursue them to still greater lengths.

Can you not say something that will be likely to have an influence in leading greater numbers of our white population to *labor, working with their own hands?* and thus do away the most unreasonable, the most pernicious, and, as I consider it, the most unchristian of all reproaches, *the reproach of labor.* Agriculture will flourish in Virginia when *white men* put their hands to it, and not very extensively, I apprehend, until this event is brought about.

Benjamin F. Station.

Prince Edward, October 9, 1834.

[From the New England Farmer.]

FARMER'S WORK FOR NOVEMBER.

Leaves for Manure.—In many situations it would be good economy to rake up leaves of trees, and the mould which has been produced by their decay, as much as can be procured at a reasonable expense, and cart and spread them in the barn yard, as a layer to absorb the liquid manure of your cattle, as well as to afford food for plants by their decomposition. Likewise, it would be well to place quantities of leaves under cover in situations where you can easily obtain them in winter to use as litter for your stables, &c. They do not rot very easily, but they serve the purpose of little sponges to imbibe and retain liquid manure, and by their use your crops may be supplied with much fertilizing matter which would otherwise be lost.

Barricade your cellar, barn, &c. against the intrusion of frost.—The most profitable banks for farmers are such as prevent his vegetables

from freezing, and keep his basement story comfortable with but little fuel.

Manure your grass ground.—You may now carry out and spread compost, soot, ashes, &c. on such of your mowing ground as needs manure. Some say, however, that a better time for manuring mowing ground, is immediately after haying, and a writer for the N. E. Farmer, with the signature *Caledonia*, (see vol. xiii. p. 41,) prefers Spring. Any time, however, will answer, when the ground is free from frost and snow, and the grass in a state not to be injured by the cattle, cart-wheels, &c. But, previous to manuring your grass land, it will be well to harrow or scarify it. Also, it will often not be amiss to sow grass seeds at the same time, to produce a new set of plants, and supersede the necessity of breaking up the sod, to prevent its being "bound out," as the phrase is.

Water-courses.—Attend to ditches and channels which give passages for water from highways, &c. and manage in such a manner that your ground may be benefitted by the wash of roads, &c.

Stock for Winter.—Do not undertake to winter more stock than you have abundant means of providing for. When young animals are pinched for food at an early period, they never thrive so well afterwards, nor make as good stock.

Cow-house, stable, &c.—The stable or cow-house should never be completely closed up, however cold the weather may be, although it is desirable that strong draughts of cold or damp air should in winter be guarded against. It may be set down as a general rule, that stables or cow-houses are too close when, on entering, the breath is affected or any smell of urine can be perceived.

It is very important to keep cow-houses and cattle-stables clean and well littered. Dung left in stables soon renders the air unwholesome, and is the cause of disorders. Cows in a stable will succed the better if allowed a square space of at least six feet each way for each cow. Two or three ventilators near the ground on the north side in summer, and the south side in winter, afford, at a trifling expense, an excellent way of renewing or sweetening the air in stables; and these may be shut when necessary by means of straw, or what is better, sliding doors.

Good food for milch cows.—Beat up in a mortar dry corn-cobs, pour boiling water over them, or boil them in a pot, stir them frequently while boiling, and when cold give the liquor to your cows.

Banking up houses.—The best mode of banking up houses, so as to keep frost from cellars and render the lower rooms warmer than they would be otherwise, is to set single boards on edge, parallel with and about a foot and a half or two feet from the sills or sleepers of the house, and fasten them in that position by pins or stakes driven into the ground. Fill in a layer of dirt between the boards and sills, and over that place a layer of straw or other litter. Then place boards flat-wise, or nearly horizontally, descending a little from the house, so as to shed rain and carry it over the boards placed edgewise, as stated above. The straw or litter will effectually prevent the frost from penetrating your cellar, to spoil your vegetables. Next to a smoky house and a scolding wife, a freezing cellar is earnestly to be deprecated, and if possible avoided.

MANGEL WURTZEL.

Mr. Wm. K. Townsend, in a letter to the editor of the New York Farmer, has the following remarks on this valuable root.

"I am every season more and more convinced of the value of this [the Mangel Wurtzel,] crop to farmers like myself, that winter a tolerably large stock. This is my fourth season of cultivating them, and I mean in future to increase the quantity threefold. I took off my crop last fall in season to seed down the field with rye and grass.—The crop of rye was excellent, and the grass is now equal to that in the same field, sowed after a crop of early potatoes. I do not believe they exhaust land more than any other root crop; if the land is well prepared, and the seed sown at the proper time, two good hoeings are sufficient. I have this season gathered the under leaves for my hogs, and they will eat them as soon as any thing that I give them. I do not think the crop is injured by taking them off. As my early beets did not come to perfection, we used the mangel wurtzel, taking out the smallest, when two grew together, in their stead; and if well cooked and prepared for the table, we think them as good as beets. I usually raise them to feed out after my turnips are gone in the spring; my milch cows do well on them, as well as other cattle, and I want no better feed for my breeding cows and store pigs along early in the spring, before they get a good bite of grass."

[From the same.]

CUT AND UNCUT POTATOES FOR PLANTING.

Mr. Fessenden—The following details of an experiment to ascertain the relative advantage of planting cut or uncut potatoes is at your service for publication if you think it of sufficient importance.

I planted this year alternate rows of cut and uncut potatoes. I put four pieces into each hill of the cut potatoes and two potatoes into each hill of the whole potatoes. The hills were three feet apart, each way, and of course the number of hills in an acre was 4840. The produce of the rows, planted with cut potatoes was at the rate of three hundred and thirty-five bushels the acre, or twenty-three thousand five hundred and twenty pounds. The produce of the rows planted with whole potatoes was at the rate of four hundred and fifty-eight bushels or thirty-two thousand and sixty pounds. The difference in the crop in favor of whole potatoes was at the rate of one hundred and twenty-two bushels the acre, but as there were twenty-two bushels more of seed the acre used in planting the whole potatoes the nett gain was only one hundred bushels. However, as one bushel of potatoes at the season of planting is usually worth two bushels at harvest time, it will be more accurate to calculate the gain at seventy-eight bushels. The kind of potatoes planted was the "*white blue nose*," which is decidedly the best potatoe for the table I have ever cultivated, though a moderate bearer unless it receive generous treatment.

Ellsworth, (Me.) 3d Nov. 1834.

[The above is a valuable article, and the experiments which it details, will go near to settle a very important and much controverted point in husbandry.—*Ed. N. Eng. Farmer.*

VETCHES, &c. PLOUGHED IN.

Under this article may be included all sorts of green manure. Amongst the most active parts employed as manure, I have found the wild species of the genus Sinapis, ploughed in fresh in the bottom of turnip drills, at the rate of twenty tons per acre. The produce bought by auction £12, while the rest of the field manured with twenty tons of farm-yard dung, brought only from £9 to £10 per acre. Other weeds, such as nettles, thistles, ragwort, &c. produce crops superior to farm-yard dung. Potato stems, fresh ploughed in on clover lay for wheat, I have found to produce crops exceeding by two bolls per acre, in quantity, with more proportionate weight of straw, the other parts of the same field manured with farm-yard dung, but otherwise under the same circumstances. The stems from three acres of good potatoes, will manure an acre for wheat to much better purpose than 15 tons of farm-yard dung, the usual quantity allowed in that part of the rotation; clover after wheat being the crop which generally precedes fallow. Under the head of "green manure," I may mention an experiment I this year made with pea straw converted into dung, without the aid of cattle. Having something of that sort on hand about the middle of last May, and being in want of some loads of manure to finish a potato field, I had the peas thrashed at the mill, and the straw and chaff carried to the side of the potato field, and made up like a large hot-bed, giving each layer of straw an ample watering. Fermentation soon commenced: and by the fifth day the mass was so far decomposed as to be easily filled into the carts. The effluvium in filling was almost intolerable. It was in this state laid in the bottom of the drills; the sets of potatoes were planted above, and the earth ploughed over the whole. Notwithstanding the dry nature of the ground, and the dry state of the weather in the summer months, the part of the field manured with decomposed pea-straw yielded a better return than where farm-yard dung was applied.—*Loudon.*

A GREAT YIELD—Caleb Chase writes the editor of the Portland Courier, in illustration of the advantages of high cultivation of land, that he raised in a garden the past season from *four* grains of wheat, eighty heads, one of which measured six and a half inches in length, and contained eighty grains, and several others were of the same length. From these eighty heads, he obtained *four thousand five hundred and thirty-six grains of wheat*, measuring little short of half a pint—being one thousand one-hundred and thirty-four fold!

This is worthy the attention of those farmers who are only desirous of increasing the number of acres on their farms—without improving the quality of the soil.

A Bad Gun.—One Alexander Gun, belonging to the Customs, was dismissed for improper conduct. The entry opposite his name on the books stood thus: "A. Gun discharged for making a false report."

THE BREEDER & MANAGER.

[From the London Lancet.]

LECTURES ON VETERINARY MEDICINE,

Delivered in the University of London, by Mr. Youatt.—LECTURE VII.

GLANDERS—ITS SYMPTOMS AND POSTMORTEM APPEARANCES.

I acknowledge, gentlemen, that I enter on the subject of my present lecture with some reluctance. The disease of which I have to speak has been recognised from the time of Hippocrates of Cos, and few modern veterinary writers have given a more accurate and complete account of its symptoms than we find in the works of the "Father of Medicine." Three-and-twenty hundred years have rolled on since then, and we are not agreed as to the tissure primarily affected, nor as to the actual nature of the disease. As to the cure of glanders, we know nothing about it. We hear of many specifics; some of them have their day—but a short one—and are heard of no more, until reproduced as new discoveries. The truth of the matter is, that we have amused ourselves with worse-than-useless speculations and theories, instead of being employed in the patient accumulation of facts.

We must pursue our course slowly and cautiously. I will first endeavour to connect together the prevailing symptoms; they may possibly lead us,—they alone can lead us—to the part primarily affected, and to the nature of the morbid affection of that part, and to the cause of that affection; and, these important points being settled, we may obtain a little knowledge as to the prevention of the disease, although we may be compelled to leave the remedial treatment pretty nearly where we found it.

ACUTE AND CHRONIC GLANDERS.

Before, however, I describe the symptoms of this disease, I must enter my protest against the common division of glanders into acute and chronic. I am aware that it exists under these forms; but I cannot allow this to any thing like the extent that has been represented by some; it is so essentially different in its nature and character, and governed by such totally opposite laws.—There is this impropriety in our division, that the chronic here comes first, and the acute succeeds. A discharge is observed from one nostril or from both; it continues for months and years, and neither the health nor the usefulness of the horse is impaired; but, all at once, the discharge increases—chancres appear on the septum—the respiration is laborious—the cough is urgent—the animal wastes away—farcy buds appear along the course of the superficial absorbents—they ulcerate, and death quickly closes the scene.

It is like the scrofula of the human subject; there are small glands under the chin of the ear, or about the throat, moveable, soft, productive of no inconvenience, and so they continue for one, two, or several years; when all at once they rapidly enlarge; they burst; the constitution becomes affected; the ulcers spread; the patient becomes emaciated; tubercular phthisis is established, and he dies. Now these are only different stages of the same disease—various causes, known or unknown, retarding or hastening its full developement and fatal termination. We may, if we please, call these stages chronic and acute, but we shall be betrayed, as we have been in glanders, into inexplicable confusion, if we regard them as different diseases, and governed by different and contradictory laws.

SYMPTOMS OF GLANDERS.

Nasal Discharge.—The earliest symptom is, almost invariably, an increased discharge from the nostril; small in quantity; constantly flowing; *not sticky at first;* aqueous; a little mucus gradually mixing with it, and this continuing for an indefinite period of time before it assumes a viscid character.

Here, gentlemen, is an error into which our best writers on veterinary pathology have fallen. They have described with sufficient accuracy the middle stage of glanders, but they have overlooked the early and most important one, when a cure might, if ever, be effected; and when the mischief resulting from contagion is most frequently produced. The discharge of glanders is not sticky when it may be first recognised. It is aqueous or mucous, but small and constant, and is thus distinguished from catarrh or nasal gleet, or any other defluxion from the nostril. I would then wish to impress it on your minds, that this small and constant defluxion, overlooked by the groom and the owner, and too often by the veterinary surgeon, is a most suspicious circumstance.

We owe a great deal to Mr. James Turner here. He first, or chiefly, directed our attention to this important and disregarded circumstance; indeed he is so suspicious of mischief, that although a horse be in ever so good condition, if he have this small constant discharge, and especially from one nostril, he separates him at once from his companions. It is a very proper precaution. The owner will not be offended, although this defluxion should not ultimately betray lurking mischief of a worse character, and he will give you credit for vigilance,—for discrimination, and pleasing attention to his interest, if you should be right in your surmise.

Mr. Turner relates a case so much in point, that I must not omit to quote it. A farmer asked his opinion respecting a mare in excellent condition, with a sleek coat, and in full work; he had had her for seven or eight months, and during the whole of that time there had been a discharge from the right nostril, but in so slight a degree as scarcely to be deemed worthy of notice, and especially as there was no adherence of the submaxillary gland, which was not larger than a tick-bean, and quite loose. He now wanted to sell her, and, like an honest man, wished to know whether he might conscientiously warrant her. Mr. Turner very properly gave it as his opinion, that, the discharge having existed for so long a time, he would not be justified in sending her into the market. The farmer ordered her at once to the slaughter-house.

A farrier, however, whose ideas of glanders had always been connected with a sticky discharge and an adherent gland, met with her there, and said that Mr. Turner had committed a most egregious blunder, and bought her and led her away. Three months passed on, when Mr. Turner, examining the post-horses in a neighbouring inn, discovered that two of them were glandered, and two more farcied; while standing next to the first that was attacked, and his partner in work, was his old acquaintance the farmer's mare, *with the same discharge from her nostril*, and who had, beyond question, been the cause of all the mischief.

This, gentlemen, will be an instructive lesson to you. In every examination for soundness,—in every medical examination of the horse, pass not over the slightest increased nasal defluxion, even although it be nearly or entirely of an aqueous character. Endeavour to get at the history of this discharge, the length of time it has existed, and its quantity and constancy. Do not be misled by its want of viscidity, whatever your favourite authors may tell you. When you read that "there always remains a peculiar degree of viscidity and glueyness in it (the discharge of glanders) which distinguishes it from all other mucous and purulent secretions," refer this to the *second* stage of the disease, and remember that for many months before this, the disease may have existed in an "insidious" and highly contagious form. In the majority of cases, however, some degree of stickiness does characterise the discharge of glanders from a very early period.

The left Nostril oftenest affected.—It is a singular circumstance that this discharge is much more frequent from the left nostril than from the right. M. Dupuy says that out of eight cases of glanders, he met with one only with discharge from the right nostril alone. This difference in the affected nostrils does not exist to so great an extent in our practice, and I am inclined to suspect that there must have been some error in the observations made by the learned professor; but in two cases out of three among us the discharge is from the left nostril alone. I know not of any anatomical or physiological fact that will account for this. I could account for the left leg failing oftener than the right;—we mount and dismount on the left side—the horse generally leads with it; there is more wear and tear of that limb; but I cannot satisfactorily account for this usual affection of the left nostril. It is true the reins are held in the left hand, and there may be a little more bearing and pressure on the left side of the mouth, but I confess that that does not sufficiently explain the result.

You observe that I have used the terms *left* and *right* instead of *near* and *off*. I do so advisedly, because the latter, originally the mere slang of the stable, however much in use among horsemen, and to a certain extent perhaps necessary to be adopted in our communications with them, are terms that have never been adopted in any foreign veterinary school. They are perfectly unknown among scientific men abroad, and unrecognised by medical men at home, except those who have been, and occasionally a little too deeply, taught in the school of the horseman and the groom. Now, that we are attempting to overtake and to vie with our veterinary continental brethren, and to vindicate our relationship to our medical brethren at home, it may be advisable, in our scientific discussions at least, to forget the vocabulary of the stable.

Lessons of Caution.—If we deny then the uniform stickiness of the discharge, we may occasionally be a little puzzled. We shall be so, and

it will teach us to be more cautious in our professional examinations, and less positive in some of our decisions. I have heard a practitioner boast that he had passed (as sound) no fewer than 60 horses in one morning. I thought it a disgraceful confession, when I first heard it; and the more I have thought of it the more have I been convinced that it involved gross dereliction of duty to his employers. It is well known that there is one practitioner who has the conducting of far more examinations for soundness than any other in the metropolis. His reputation is founded entirely on his caution. He employs what some would think a very unnecessary portion of time in every examination; and has been known to detain a horse, one, two, or three days in his stable before he would give a decided opinion. We are beginning to learn a lesson of caution already, when we find the difficulty of distinguishing the characteristic discharge of glanders. I shall have too many occasions to impress this lesson upon you as we go on.

[From the Memoirs of the Penn. Agricultural Society.]

ON BREEDING SHEEP, &c.—BY JOHN HARE POWELL, ESQ.

Powellton, 1824.

Dear Sir,—The forms of the various breeds of British sheep, are distinct, as the districts whence they take their names. The objects to be attained in Great Britain, and most parts of America, are a quick return in *flesh*, and fleece, with as little offal, as is compatible with the due proportion of bone, indispensable for the healthful exercise of the animal, or the exertion necessary for the supply of its food. We find that particular breeds, have been for ages retained in certain parts of Europe, where the shape of the animal has been made conformable to the purposes, to the climate, to the food, and face of the country upon which it has been reared. On the mountains of Scotland and Wales—on the bare chalk hills of the southern and western parts of England, races of sheep have always been bred, which by the lightness of their carcasses and the activity of their muscles are enabled to find sustenance, and by the closeness of their fleeces, are fitted to endure the exposure which in mountainous regions, must always be met. In the rich vales of Leicestershire, and highly cultivated marshes of Lincolnshire, and other counties in the North, families, the very opposite to these have been as carefully bred, possessing heavy carcasses, long wool, shorter legs, very small bone, with the most sluggish dispositions, without either the desire, or the power to make exertion to obtain food. In the western parts of America, where the population is thin and the consequent demand for flesh exceedingly small, attention to the carcass of the sheep, has not been properly given. The value of its fleece is certainly the more important object of regard, as the difficulty of transporting the wool, when manufactured into cloth, is so much diminished, by the condensed value of the commodity, that a market is found at little cost. But it is to be apprehended, that disregard of shape and inattention to the rules of breeding, will eventually injure the constitution of the sheep, and materially affect the useful secretions, and consequently the quality, and weight, of the wool.—This mistake has not been confined to those parts of our country where the carcass can with difficulty be sold, but may be traced in some large Merino flocks in the neighbourhood of the great towns. The extraordinary power, which the vigilance, and science of some distinguished breeders in England, have shown, in varying the forms, and even in assigning, if the phrase may be used, definite properties, shapes, and even peculiar colours, to whole families of neat cattle and sheep, can scarcely be believed, except by those who have seen the animals thus improved.

An able exposition of the scientific principles and practical deductions upon which their art has been founded, was made some years since by one of the most eminent surgeons in Europe, the celebrated Henry Cline, whose authority has been universally received, by practical men, except upon one point—the injurious effects of breeding closely in.

Sir John S. Sebright, at the instance of Sir Joseph Banks, has published an excellent paper, which as it exposes the error of Mr. Cline and evinces perfect knowledge of the breeder's art, I have recently obtained from England, and have now the honour to present.

I am, with great respect, yours, &c.

JOHN HARE POWELL.

JONATHAN ROBERTS, ESQ.
President of the Pennsylvania Agricultural Society.

THE ROT IN SHEEP.—Many of your readers are aware that by the frequent and repeated moistening of land the grass grows in abundance, much more quickly, and has a much more luxuriant appearance, particularly when the weather is close and warm. It is this quickness of its growth which I think is the great cause of the mischief. When grown slowly, time is allowed for that bitter principle to be more fully elaborated, on which depends the good quality of our grasses, which is the case in a moderately dry season, and when also the disease does not make its appearance. But when, contrary to this, the grass grows too quickly to allow that change taking place, and it does not contain that bitterness, but has a more delicate appearance, or what is termed squashy, the sheep become diseased from the want of that usual stimulus to the bowels, the bitter principle of well grown grass. In consequence of this they become torpid, the food not well digested, the secretion of the bile sluggish; and here is the foundation of that mass of disease in the liver. How far this opinion may be correct I leave to the judgment of others; but should it prove so, the remedy will be simple when taken in the first place, that is, before the matter is formed in the liver. I presume that for the want of that stimulus to the bowels, the liver does not perform its functions, and becomes overloaded with bile, part of which is again circulated with the blood; but in time, from its stagnation it becomes putrid, and matter is formed upon the liver, in small tubercles, which bursting into each other become abscesses, in which are found the hydatids or flukes. By what means they get there is at present a matter of conjecture. It is certain they are animalculæ, as they have been seen to move several hours after their removal from the sheep. It may be asked by some, how are we to know the rot in its first stage? The weather, the situation of his land, together with his own judgment as to the probability of the flock becoming diseased are the shepherd's best guides. The sheep, themselves, in an early stage of the disease will appear slothful, and their eyes dim, with a tinge of yellow, i. e. having a jaundiced appearance. In this state, I should give a few doses of milk mercurials, saline aperients, and then a mild bitter infusion, such as infusion of chamomile or of gentian, two or three times a day.—*Loudon's Magazine.*

[From the New Hampshire Telegraph.]

GOOD HORSES.

Perhaps no subject of as great importance, is so much neglected, as that of improving our breed of horses. True, we have good stock about us, but sufficient care is not taken to improve it. Many is the farmer who owns what he supposes a rather indifferent horse, which if properly broken would bring him two or three hundred dollars, as quick as one cent will bring another. This section of the country, New Hampshire in particular, has never been very famous for its horses. But we are digressing. We only intended, when we commenced, saying simply, that there are and have been exceptions. We have one in our eye, and shall give a word or two in relation to it, under the head of

FAST TROTTING.—We learn from Keene, that a beautiful chesnut filly, the property of Mr. Stillman French, of that place, recently trotted the distance of 12 miles in 42 minutes! and with so much ease, that within a few minutes after she went to grazing. It was thought that she would have gone much quicker, had she been pressed at all—but it seemed only her natural gait; and yet it was mile in 3 minutes 30 seconds, and following it. We hope the discovery of such trotters among us, will have a tendency to make our farmers ascertain the mettle of their horses, before they throw them away upon jockies. But let them be careful that they take the right way to ascertain, so that they do not injure them.

EARLY RISING.—Buffon rose always with the sun, and he used often to tell by what means he had accustomed himself to get out of bed so early. "In my youth," he said, "I was very fond of sleep; it robbed me of a great deal of my time; but my poor Joseph (his domestic) was of great service in enabling me to overcome it. I promised to give Joseph a crown every time that he could make me get up at six—The next morning he did not fail to awake and torment me; but he received only abuse. The day after he did the same, with no better success; and I was obliged at noon to confess that I had lost my time.—I told him that he did not know how to manage his business; that he ought to think of my promise and not mind my threats. The day following he employed force; I begged for indulgence—I bid him begone—I stormed—but Joseph persisted. I was therefore obliged to comply, and he was rewarded every day for the abuse which he suffered at the moment when I awoke, by thanks, accompanied by a crown, which he received about an hour after. Yes, I am indebted to poor Joseph, for ten or a dozen of the volumes of my work."

THE GARDENER.

[From the Young Gardener's Assistant]

GENERAL OBSERVATIONS ON THE FRUIT GARDEN AND ORCHARD.

In my preliminary observations on the subjects I have hitherto treated on, I am aware that it may appear to some, that I have not sufficiently urged the importance of a judicious selection of situation, exposure, aspect, soil, &c. My object in not insisting on a strict attention to these important points was, because I know that, though good land is abundant in this extensive country, it is impossible for every one to choose for himself; and rather than any disadvantages in these respects, should discourage proprietors of land from attempting to raise garden products, so necessary to the comfort and convenience of every family, I have endeavoured to show them how to use to advantage whatever land may surround their places of abode. As however some have a choice, it may be necessary to offer some further remarks on the subject.

The situation of an orchard or fruit garden should be one that has the advantege of a free circulation of air, and is well exposed to the south, also to incline a little to the east, and south-west. When the situation is low and close, the trees are very liable to become mossy, which always injures them by closing up the pores of the wood; they are also more liable to be affected by blight. Although having an orchard closely pent up by trees, &c. is injurious, nevertheless a screen of forest trees, at such a distance from the fruit trees as that the latter will not be shaded by them, is of very great service in protecting the trees in spring from severe cold winds. A good strong loamy soil, not too retentive of moisture, to the depth of thirty inches or three feet, is most suitable for an orchard. Great attention must be paid to the substratum so that the ground is well drained, for if the top soil be ever so good and the bottom be wet, it is a very rare case to find that the trees will prosper for many years, before they begin to be diseased and go to decay. As it is so indispensably necessary to the success of fruit trees that the bottom be dry, if it be not naturally so, it must be made so, by judicious draining.

When it is necessary to make the bottom dry by draining, it must be done for some time before the trees are to be planted. In performing this work, the ground must be trenched, and when the trench is open, stones or brick bats, &c. must be laid over the bottom to the thickness of six inches, a little coal ashes or small gravel must be sprinkled over the top of the stones, &c., and then the surface be gently rolled. Also drains may be made in different directions so that any excess of moisture can be taken entirely away from the ground.

It is well known to most cultivators that exposure of soil to the atmosphere greatly improves them, as is experienced by ridging and trenching. Where the soil is stiff and stubborn, small gravel, sand, coal, ashes, lime, light animal and vegetable manure, and other light composts are very appropriate substances to be applied, and will if carefully and well worked into the ground soon bring it into a proper condition for most purposes.

Previous to laying out an orchard or fruit garden, the soil should be manured and pulverized to a great depth. The soil should be sweet, that the nutriment which the roots receive may be wholesome; free, that they may be at full liberty to range in quest of it; and rich, that there may be no defect in food.

If orchards be made from meadows or pasture lands, the ground should be improved as much as possible by manuring, trenching, ploughing, &c. If this is not done to its full extent, it should be done in strips of at least six feet in width along where the fruit trees are to be planted, and at the time of planting, let the holes be dug somewhat larger than is sufficient to admit the roots in their natural position, and of sufficient depth to allow of a rich and well pulverized mould to be thrown in before the trees are planted. In planting fruit trees, they should be placed two or three inches deeper than they were in the nursery bed, and the earth intended for filling in, should be enriched and well pulverized by mixing in some good old manure, and if any leaves, decayed brush, rotten wood, potato tops, or other refuse of a farm be attainable, let such be used around the trees in filling, taking care that the best pulverized mould be admitted among the fine roots. The trees in planting should be kept at ease and several times shaken, so as to cause an equal distribution of the finer particles of earth to be connected with the small fibres of the roots; and when completely levelled, let the ground be well trodden down and moderately watered, which should be repeated occasionally after spring planting, if the weather should prove dry.

As some difference of opinion exists among practical men as to the best time for planting fruit trees, the following extract from Mr. Prince's Treatise on Horticulture is submitted:

"*Seasons for transplanting.*—Spring is the season when we find the most pleasure in making our rural improvements, and from this circumstance probably it has become the general season for planting trees, but experience has proved the fall planting to be the most successful, especially in those parts of the United States which are subject to droughts, as the trees planted in autumn suffer little or none from drought when those set out in Spring often perish in consequence of it. Notwithstanding, with regard to those fruits that have been originally brought from warmer climates, such as the peach, apricot, nectarine, and almond, which are natives of Persia, Armenia, &c. it is necessary for us to consult the operations of climate also; and, from a consideration of those attendant circumstances, I have come to the following conclusions: In localities south of New York, the fall season is preferable only for the apple, pear, plum, cherry, quince, and all other trees of northern latitude; whereas the spring is to be preferred for the peach, apricot, nectarine and almond, which for the reasons before stated, might, during severe winters, suffer from the intensity of the frosts. Still I do not mean to assert that trees of those kinds are certain to be injured by the winter, as in very many seasons they are not in the least affected; still they are exposed to vicissitudes which may or may not occur.—Many gentlemen, however, of excellent judgment, make their plantations in the fall, which only serve to prove, that even in the most intelligent minds, a diversity of opinion exists.

"*Trees, &c. on their arrival at the place of destination.*—As soon as the trees arrive at the place where they are to be planted, let a trench be dug in cultivated ground, the bundle unpacked, and the roots well wet, and immediately covered with earth in the trench, observing to make the earth fine that is spread over them, so as not to leave vacancies for the admission of air to dry the roots, it having been found by experience that the thriftiness of trees, the first year after transplanting depends much on the fine fibres of the roots being kept moist, and not suffered to dry from the time they are taken up until they are replanted; their increase, therefore, must depend principally on the subsequent management on their arrival at the place of destination: for if, when the bundles are unpacked, the trees are carelessly exposed to drying winds, the young fibres of the roots must perish, and the trees if they live at all, cannot thrive the first season, as they can receive little or no nourishment until these fibres are replaced.

"*To cause the trees to thrive.*—The ground where they are planted must be kept cultivated; young trees will not thrive if the grass be permitted to form a sod around them, and if it should be necessary to plant them in grass grounds, care must be taken to keep the earth mellow and free from grass for three or four feet distant around them, and every autumn some well rotted manure should be dug in and around each tree, and every spring the bodies of the apple, pear, plum, and cherry trees, and others that it is particularly desirable to promote the growth of it, should be brushed over with common soap, undiluted with water; this treatment will give a thriftiness to the trees surpassing the expectation of any one who has not witnessed its effect. Should the first season after transplanting prove dry, regular watering will be necessary, as from neglect of proper attention in this respect, many lose a large portion of their trees during a drought."

Such kinds of fruit trees treated upon in this work as may require any other than good ordinary soil may be supplied, by judicious management; and if a proper attention be paid to the situation and aspect in arranging a fruit garden, each kind may be so accommodated as to promote its fruit's ripening earlier or later than the ordinary season, by varying the aspect; but grape vines or other tender fruits should not be planted where the sun's influence does not fully operate.

Where there is a great extent of close fencing or wall, it is advisable to plant trees of the same kind against different aspects. Such as one or two May Duke Cherries against a south aspect, which will ripen earliest, next, against either an east and west, and lastly, against a north aspect; by observing this method with dwarf cherries, plums, gooseberries, currants, &c. the fruit will ripen in succession, and thus a supply of them is considerably lengthened. The early blooming fruit trees will sometimes need protection in warm aspects; for which arrangements may be made by keeping awning, matting, netting, &c. at hand, to shelter them with in threatening weather, or to screen them from the intense heat of the sun after a frosty night; this with a sprinkling of water, as

the air gets warm, will often prevent any serious consequences from slight frost.

Those who may have various soils, should suit them to the different kinds of fruit. Apples and pears require a strong loam, but rather the lightest for the pear. Apricots, cherries, peaches, plums, and nectarines, a good deal lighter than for the apple and pear; such fruits as may require peat, bog, or any other extraordinary kinds of earth, will be noticed as we proceed.

The following observations on fruit gardens are taken from the third volume of the New York Farmer and Horticultural Repository. Article 190, page 225, communicated by an *Old Man:*

"A *fruit garden* in this *free* country ought to be protected by nothing less formidable than a pale or picket fence. It is in vain to think of having good fruit in small quantities, unless the proprietor can control every thumb and finger within his grounds, so that his stone-fruit, more especially, may be fully ripe before it be removed from the tree. It is a fact, though it may not be generally known, that *such fruit is often considered ripe, and eaten, before it has attained one half of its finest flavor.*

A pale or picket fence is a great protection to a *fruit garden;* for though some desperadoes may break through a few times in a season, it will effectually prevent the inroads of the small fry; and it has another important advantage: there are men and grown boys whose *business* frequently leads them across lots, through peach orchards, and directly under pear trees, that stand in a common enclosure, but who are too cautious to scale a garden fence, because they have no *excuse* for appearing on the inside; and these constitute a majority of the prowlers.

Further, *those who shoot into a garden at night, generally take aim in the day time.* Prevent their observations, (this fence will in many cases prevent it,) and the temptation and danger will greatly be lessened. A good watch dog, however, is in all cases a valuable auxiliary.

There may be many causes why *fruit gardens* have not been more common among our independent farmers. I think that more would be done, however, were they better acquainted with fine fruit. To be fine, it must be well ripened; and the small part that the owner can get from a few small *cherry trees*, (for instance,) warring amongst boys and birds, is seldom a fair specimen. Many such proprietors, though old men, have never eaten a ripe *May Duke*, or a ripe *black Tartarian.*

The importance of apples, both for the desert and for culinary purposes, is so generally admitted, that to do without them would be considered a great privation; yet one month in summer passes away with a great majority of the landholders, destitute of this luxury, while *the yellow harvest, the juneating, the summer rose*, and others, are dropping from the trees of the provident.

Of *the white promordian* plum, *the precoce de Tours*, and other early kinds, it is enough to ask, who has tasted? and I should be unwilling to say that one in ten of our inland farmers had ever eaten an *Apricot* or a *Nectarine.* Summer pears are of frequent occurrence, but of those delicious kinds that grace the desert in winter, among many, even the existence is not known. I am not dealing in fiction.

And the *Apricot* is a fine fruit, too little known. (*Where?* I write with reference to a certain meridian, but the remark will serve without material error, as the almanac-makers say, for a region of hundreds of miles in extent.) Many varieties of this fruit are enumerated by nurserymen; and if not quite equal to the peach, remember! they ripen one month earlier, and help to fill a wide space in the circle of summer fruits. *The same climate that suits the peach will mature them on standard trees in the open ground.* I speak from the experience of several years, and find them in every respect as hardy as the peach tree; neither are the blossoms more injured by vernal frosts.—Like the plum, the fruit is subject to the attacks of the curculio, and may be protected in the same manner. Under our bright and genial skies, it is to be regretted that we have known so little of this wholesome and delicious fruit.

The number of trees required in a *fruit garden* must depend on particular circumstances. Where the peach tree flourishes, the apricot, quince, and nectarine, (*that smooth skin peach of peculiar flavour,*) should be added; but in a large part of the state of New York, the chief dependence must be on cherries, plums, and pears, including the earlier varieties of the apple. A liberal allowance for unfavourable years should be made; and let the horticulturist remember, that "enough means a little more" (at one time than another.)

Another consideration in favour of a good sized garden may be presented; in squares, twice the length of fence, will enclose four times the quantity of ground.

At least three modes of arranging the trees have been adopted. One is to lay out the ground in connected equilateral triangles, and plant at the angles. *This places the trees more equally over the ground*, than some other plans, each tree, except those at the sides, standing in the centre of a hexagon, surrounded by six trees at equal distances. More trees will stand on a given piece of ground in this order, *with the same distance between the nearest trees*, than if planted in squares. In the latter form, each tree stands in the centre of a square, surrounded by only four others at equal distances.

The advantage of the hexagonal form is overbalanced, however, in small enclosures, by unoccupied spaces at the sides; and the same objection applies to the quincunx. For this reason, I prefer planting in squares.

Some writers object to manuring fruit trees. I read one of these last season, just before I started with a friend on an excursion of nearly 100 miles through the country; and on passing the various farms, our attention was continually turned to the subject. We observed, without exception, that peach trees more especially, which received the wash of the cow-yard, were distinguishable by the deep green of their leaves, and the greater size of the fruit: and the flavour of these was unquestionably finer than the peaches from trees with paler leaves. The juices in fruit undergo an additional *elaboration;* and eminent horticulturists have believed that no injurious effect is perceptible, even from such manure as taint the stalks and leaves of culinary vegetables.

In preparing to plant my *fruit garden*, the holes were ordered to be dug six feet in diameter, and two feet in depth. The sub-soil was thrown back, and layers of potato tops, straw, &c. were covered with sods, or rich mould from the surface. Leaves and decaying brush from the woods would be a valuable addition. When treated in this manner, not only are the trees more likely to grow, but grow so much faster, that they come sooner into full bearing by several years. This is not all; the fruit will be finer in both size and flavour, and more especially in seasons of severe drought."

Potatoes—Planted at one foot deep produced shoots at the end of the spring; at two feet, not till the middle of the summer; at three feet, their roots were very short, and did not come to the surface; below three feet they never vegetated. Several were buried in a garden at 3½ feet, and after two years were found without any germination, but with their original freshness, firmness, and proper taste.—*Ann. Soc. Agr. Fr.*

A S-q-u-a-s-h.—We have now in our office a squash, raised by Mr. Joseph Carpenter, on a farm in Smithfield, belonging to Nicholas Brown, Esq. of this city, which measures four feet seven inches round the middle, in one direction, and four feet four inches in the other. It weighs fifty-six pounds, and sprung from seed brought from Marietta, Ohio.—*Providence Journal.*

The Seasons—A late western paper has the following notice of the peculiarities which have marked the seasons of the present year. The description will answer very well for the region of the Middle States:

"We have never known a season in our life that was not the most remarkable that was ever seen and felt. It is either the hottest, or coldest, or dryest, or wettest, or earliest, or latest, or rainyest, or snowyest, or fruitfulest, or barrenest, that was ever heard of. But of all the most remarkable years we remember, we think the present the most remarkably remarkable. First comes a frost in May that turns all the young leaves red and brown, as if 'twere October;—kills all the fruit, and destroys nearly every thing else. Then the locusts desolate the country. Then a drought follows that dries up the rivers, burns the corn to death, annihilates the potatoes, and raises the thermometer higher than was ever known—This over,—come rains which nearly wash away North Carolina; and root up the cotton trees all through the South. Finally, the scene closes by Jack Frost stepping in and chewing up the tobacco crop with the most cool and icy composure."

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The Season in Missouri, and curing Hay—Hop culture—Report of Horticultural Society—Molasses from potatoes—On the condition of Agriculture in Virginia—Farmer's work for Nov.—Mangel Wurtzel—Planting Potatoes, cut and uncut—Vetches, &c. for manure—Great increase of Wheat—A bad Gun—Youatt's Lectures; Glanders—on Breeding Sheep—Rot in Sheep—Good Horses—Early Rising—Fruit Garden and Orchard—Potatoes, depth of planting—Great Squash—The Seasons.

BALTIMORE PRODUCE MARKET.

☞ *These Prices are carefully corrected every* MONDAY.

	PER.	FROM	TO
BEANS, white field,	bushel.	—	3 00
BEEF, on the hoof,	100lbs.	4 50	5 00
CORN, yellow,	bushel.	70	74
White,	"	67	68
New,	"	57	61
COTTON, Virginia,	pound.	13	15
North Carolina,	"	14	16
Upland,	"	15½	17
FEATHERS,	pound.	37½	40
FLAXSEED,	bushel.	1 60	1 62
FLOUR—Best white wheat family,	barrel.	6 25	6 75
Do. do. baker's	"	5 75	6 25
Do. do. Superfine,	"	5 00	5 25
Super Howard street,	"	5 12	5 25
" " wagon price,	"	5 00	—
City Mills, extra,	"	5 12	5 25
Do.	"	4 87	5 00
Susquehanna,	"	5 25	—
Rye,	"	—	—
GRASS SEEDS, red Clover,	bushel.	5 00	5 50
Timothy (herds of the north)	"	3 00	3 50
Orchard,	"	3 00	3 50
Tall meadow Oat,	"	2 00	2 50
Herds, or red top,	"	1 25	—
HAY, in bulk,	ton.	—	17 00
HEMP, country, dew rotted,	pound.	6	7
" water rotted,	"	7	8
HOGS, on the hoof,	100lb.	4 87	5 12
HOPS—first sort,	pound.	15	—
second,	"	13	—
refuse,	"el.	11	—
LIME,	bush	30	33
MUSTARD SEED, Domestic,	"	5 00	6 00
OATS,	"	30	33
PEAS, red eye,	bushel.	60	—
Black eye,	"	85	—
Lady,	"	100	—
PLASTER PARIS, in the stone,	ton.	3 12	—
Ground,	barrel.	1 37	—
PALMA CHRISTA BEAN,	bushel.	1 50	1 56
RAGS,	pound.	3	4
RYE,	bushel.	67	69
TOBACCO, crop, common,	100 lbs	4 00	5 00
" brown and red,	"	5 00	7 00
" fine red,	"	7 00	9 00
" wrappery, suitable for segars,	"	6 00	12 00
" yellow and red,	"	8 00	12 00
" yellow,	"	13 00	17 00
" fine yellow,	"	15 00	25 00
Seconds, as in quality,	"	3 50	5 00
" ground leaf,	"	5 00	9 00
Virginia,	"	4 00	—
Rappahannock,	"	—	—
Kentucky,	"	4 00	9 00
WHEAT, white,	bushel.	1 05	1 10
Red,	"	98	1 02
WHISKEY, 1st pf. in bbls	gallon.	32	33
" in hhds	"	—	30½
" wagon price,	"	28	28½
WAGON FREIGHTS, to Pittsburgh,	100 lbs	—	1 50
To Wheeling,	"	—	1 75
		washed.	*unwash*
WOOL, Prime & Saxon Fleeces,	pound.	50 *to* 60	24 *to* 26
Full Merino,	"	44 50	22 24
Three fourths Merino,	"	37 44	22 24
One half do.	"	33 37	22 24
Common & one fourth Meri.	"	30 33	20 22
Pulled,	"	31 33	22 24

BALTIMORE PROVISION MARKET.

	PER.	FROM.	TO.
APPLES,	barrel.	$3 00	$4 00
BACON, hams,	pound.	11	—
Shoulders,	"	—	10
Middlings,	"	—	10½
BUTTER, printed, in lbs. & half lbs.	"	25	37
Roll,	"	15	25
CIDER,	barrel.	4 00	5 00
CALVES, three to six weeks old	each.	4 00	7 00
COWS, new milch,	"	22 00	30 00
Dry,	"	9 00	12 00
CORN MEAL, for family use,	100lbs.	1 56	1 62
CHOP RYE,	"	1 56	1 62
EGGS,	dozen.	19	20
FISH, Shad, salted,	barrel.	5 75	6 00
Herrings, salted, No. 1,	"	4 75	—
Mackerel, No. 1, 2 & 3,	"	4 87	6 75
Cod, salted,	cwt.	2 50	3 00
LAMBS, alive,	each.	1 25	2 00
Slaughtered,	quart'r	31	50
LARD,	pound.	10	12
ONIONS,	bushel.	62	75
POULTRY, Fowls,	dozen.	—	2 50
Chickens,	"	1 75	2 00
Ducks,	"	—	2 50
POTATOES, Irish,	bushel.	50	62
Sweet,	"	62	75
TURNIP,	"	37	50
VEAL, fore quarters,	pound.	7	—
Hind do.	"	8	—

ADVERTISEMENTS

BEARING GRAPE VINES.

A GENTLEMAN in the vicinity of Baltimore removing from his present residence, is taking up a few of Herbemont's Madeira Grape Vines, three years old last spring. They are remarkably fine vines, which he had planted in his garden for his own use. They bore their first crop of fruit the past summer, and are now in fine order for transplanting. Persons wanting such vines can be supplied with them at from 75 cts. to $1 each, by applying at the American Farmer Seed Store, in Calvert street, to I. I. Hitchcock, who will show a sample of the vines, and pack in the best manner any that may be ordered at a distance. nov 25

GRAPE VINES.

HERBEMONT'S Madeira, one, two, three and four years old, from 25 cents to $1 each.
Isabella, two and three years old, at 25 to 50 cts each.
Catawba, one year old, 25 cts. each.
White Scuppernong, two years old, at 37½ cents each.
Sultana, one year old, at 50 cts. each.
Woodson, two years old, at 37½ cents each.
Red Bland, one year old, at 25 cts. each.
Are for sale at this establishment, and will be well packed to go any distance. no. 25

GRAPE VINES.—The subscriber will receive orders for VINES from Mr. Herbemont's Nursery, till the 15th of November.

For extensive cultivation in this climate there is no grape so valuable as the Herbemont. But little inferior to many esteemed foreign varieties for the table, it is equal to any of them as a Wine grape, and surpasses them in the important qualities of abundant bearing and resistance of frost.

Persons in any part of this State, the District of Columbia, and in some parts of Virginia and Pennsylvania may avail themselves of this agency.—Price in Baltimore for 1000 Vines, $100; for 500, $62 50; for 100 do $15.
Oct. 28 4t. G. FITZHUGH, Jr.

WESTPHALIA GEESE.

A FEW pairs of these very superior Geese are now ready for delivery at 5 dollars a pair. Apply to I. I. HITCHCOCK,
no 18 Amer. Far. Estab.

GAMA GRASS SEED

JUST received, and for sale at this Establishment—Price 50 cents per ounce.

PEA FOWLS.

ONE pair 2 years old, and one pair 3 years old, for sale at this establishment. Price $3 a pair. no 4

PUPPIES.

SEVERAL YOUNG POINTERS of the very best blood, will be old enough for sale, early in November. Also several young GREY HOUND sluts, from the pair sent from Europe to the president of the U. S., and by him presented to this establishment last fall.

Also one SLUT, one year old, from my grey hound slut, by a very fine imported Pointer. She appears to have the Pointer's nose and the shape and agility of the greyhound—color black. Oct. 7.

AGENCY FOR TREES, &c.

THE subscriber respectfully offers his services to his customers and the public generally, as agent for the procurement of Fruit and other Trees. It may not be generally understood or duly considered, that few nurseries contain *all* kinds of trees in equal perfection. One, for instance, is celebrated for its fine apple trees, another for its peaches, and a third for its plums or pears, while scarce any of them can make up a collection of *all kinds* of trees of the best quality. In this respect the subscriber flatters himself that he possesses peculiar advantages. His own nursery is not extensive or forward enough to afford many trees for sale yet, and his acquaintance with nearly all the most eminent nurserymen in this country, and of the peculiar excellencies of their respective establishments enables him to select from them all, probably a better collection of fruit trees than any one of them can furnish. Trees ordered from any particular nursery, or to be selected by me, will be charged at nursery prices and 10 per cent commission added. Orders ought to be forwarded immediately, and all confided to the subscriber's agency shall receive his best attention.

I. I. HITCHCOCK,
Oct. 14. Amer. Farmer Establishment.

WOOL.

LYMAN REED & CO. Commission Merchants, No. 6 S. Charles street, Baltimore, Md.—devote particular attention to the sale of WOOL. All consignments made them will receive their particular attention, and liberal advances will be made when required. May 9.

FRUIT AND ORNAMENTAL TREES.

THE subscriber has now for sale, at the Bartram Botanic Garden and Nursery, near Philadelphia, a very extensive assortment of the finest ORNAMENTAL TREES, of all sorts suitable for planting in streets or avenues.

FRUIT TREES, of every good variety.
Hardy Flowering Shrubs and Evergreens.
Herbaceous Plants, Bulbous Roots, &c.
MEXICAN DAHLIAS, of 276 varieties.

ALSO,

A very large collection of the finest GREEN HOUSE PLANTS, including upwards of 1000 Camellia Japonicas of 80 varieties, 5000 Roses of 250 varieties, (chiefly new and hardy sorts,) 2000 Geraniums, of 130 varieties, with every other sort of plants usually cultivated for sale; all of which will be disposed of at moderate prices, and a liberal discount allowed to gardeners or others, who buy to sell again.

Collections of AMERICAN SEEDS or PLANTS put up for Europe, or elsewhere, in such manner as to ensure their safe transportation.

Orders per mail, or left at the store, No. 21 Philadelphia Arcade, will be promptly attended to, and plants carefully packed and forwarded agreeable to directions to any part of the United States. Address

ROBERT CARR,
nov 4. 4t. *Kingsessing.*

MORUS MULTICAULIS.

THE subscriber has on hand a few hundred of this celebrated Tree, unrivalled in the quality of its leaves as food for the silk worm, for which he is ready to receive orders (accompanied by the cash) with *particular* directions for the delivery of the trees on or after the first of Nov. next. Price 50 cents each, $5 per dozen, or $40 per hundred.

The success and ease with which this tree is propagated, the extraordinary quickness of its growth, the superiority of its leaves over *all* others for the silk culture, and its uncommon luxuriance and beauty, altogether recommend it to the favourable notice of *every farmer* as a most valuable acquisition. I. I. HITCHCOCK,
aug. 26 Amer. Far. Estab.

BULBOUS ROOTS.

HYACINTHS, Tulips and a general assortment o Bulbous Roots, suitable for the present season, for sale low at this establishment by
Oct. 28. I. I. HITCHCOCK.

WHITE TURKIES.

I HAVE now ready for sale, several pairs of these truly beautiful fowls, at $5 a pair, they are of this year's crop. I. I. HITCHCOCK,
no 18 American Farmer Establishment.

THE FARMER & GARDENER;

AND LIVE-STOCK BREEDER & MANAGER.

CONDUCTED BY I. IRVINE HITCHCOCK, AND ISSUED EVERY TUESDAY FROM THE AMERICAN FARMER ESTABLISHMENT, AT $5 PER ANNUM, IN ADVANCE

No. 31. **BALTIMORE, DECEMBER 2, 1834.** **Vol. I**

☞This publication is the *successor* of the late
AMERICAN FARMER,
(which is discontinued,) and is published at the same office, at five dollars per year, payable in advance.
☞When this is done, 50 cents worth of any kind of seeds on hand will be delivered or sent to the order of the subscriber with his receipt.

American Farmer Establishment.

BALTIMORE: TUESDAY, DECEMBER 2, 1834.

ON RAISING PUMPKINS, AND WRITING LETTERS.—One of our subscribers called on us the other day (☞*to pay his subscription!*) and the conversation turned on the great value to the farmer of pumpkins. He mentioned a fine crop which had been raised the past season by a neighbor of his, and we requested him to communicate to us the particulars, which he has done in the letter on our next page, but with the restriction (by which we feel bound, but which we beg leave to say we think injudicious) to not append his name to it. We deem the letter an excellent one on an important subject, and anticipate that it may have the effect of stimulating some reader of it, to avail himself of the benefit of the pumpkin crop, and thus make many pumpkins grow where not one grew before.

See how easy it is for a practical man to do much good by simply writing a letter; and how easy it would be for every subscriber to this journal, to write one letter each month on some subject of farming or gardening or stock management. If farmers from (what we deem) a false delicacy, restrict us from using their names, or from a most false and mischievous notion, that there is requisite for the due conveyance of their ideas, some secret art or mystery of style, or of composition, or penmanship, then, we repeat, write to us *confidentially* and furnish our editorial noddle with your knowledge *in any style*, and we, with not a particle more of capability, but with less fastidiousness will assume the responsibility and bring before our readers many a rich treat of experimental knowledge, which would do more real honor to the writer than the conquest of a kingdom, or the obtainment by the usual means of the best office in the country. The conductor of this paper wishes to act the part merely of *moderator* to his body of subscribers, every one of whom should also be a contributor to the columns of the paper in some shape. He wishes to hear every one on the great subject, which occupies his and their attention, and will always with pleasure re-write, correct, modify, or give entire, with or without the writer's name, any thing with which he may be favored, which others are likely to want to know.

HARTFORD, Con. Nov. 12, 1834.

To the Editor of the Farmer and Gardner:

Sir—I noticed in your paper, a desire of information relative to the Phalaris Americana or Ribbon Grass, and a wish for some of the seed. Since your enquiries you probably have seen a publication on the subject in the Cultivator, under the hand of Doctor Harris, Canterbury, Conn. giving a full history of the Grass. I now have the pleasure to inclose you some of the seed—I have not tested it—and cannot say that it is good—indeed it is very difficult to get the seed which is perfect—I also enclose you a few roots of the plant, which I think placed in a glass house will sprout immediately. I would send more of both, but don't wish to entrench upon the courtesy of a friend who takes this letter.

Yours, very respectfully,
ELIZUR GOODRICH, Jr.

Mr. Goorich will please accept our sincere thanks for the above letter, and particularly for the seed and roots, which came safe to hand. The roots were planted in a flower pot till we could send them to our place in the country, but in the course of the first night some of our numerous friends the rats, who by long residence in this establishment, and free access to our paper, have become enthusiastically fond of agricultural matters, took a fancy no doubt that a pot was a less suitable place for grass roots than a *bed*, and therefore transplanted them, and have neglected thus far to report to us to what part of the concern they have removed them. We may, one of these days, discover their experimental farm and garden to which they have taken some of our most valuable seeds, and recently a fine lot of bulbous flower roots which we had placed to bloom in pots and glasses.

The seed sent us we will endeavour to give a better account of hereafter, as we shall *insist* on managing that ourselves.

The article by Dr. Harris will be found in a subsequent page.

NUT GRASS.

[From the (Augusta, Ga.) Transcript of News, &c.]

"A correspondent desires to learn 'what are the best means of preventing the growth of nut grass?' We dont know, but would be glad to communicate an answer, from one better acquainted with the subject, through our columns, or to receive it through those of some of our publications devoted to agriculture."

We know little of this grass—a specimen of it was sent to this office some years ago, and the conclusion was then formed that the roots would make good food for hogs. Probably these friends of the human species would make the most efficient exterminators of this pestiferous plant—but we have indeed little knowledge on this subject.

From the United States Gazette.

BEES—Mr. Chandler: I believe it will be admitted, on all sides, that Lancaster county, in some things, is not easily beaten. I have been spending a few days with my friend T. G. Henderson, of Pequea, and last evening, assisted him in taking and weighing, from a single hive of bees, one hundred and thirty six pounds of the whitest and most delicious honey I ever laid my eyes on.

This may appear incredible to many, as a box of the common size would not contain more than half the quantity; what I have stated, however, is a fact, but instead of the common box, a flour cask was prepared for them, by sawing off about six inches, and putting cross sticks in the usual way, and in this they were hived, in the early part of June last. Mr. H. says, he thinks he has, in this way, more than once, taken over a hundred pounds from a single hive, but never saw any so well filled as the present.

[From the Gardener's Magazine.]

THE VALUE OF GREEN VEGETABLES AS MANURE

Was strikingly proved by me in the spring of 1833. I had a trench opened of sufficient length to receive six sets of potatoes; under three of these sets I placed green cabbage leaves, but the other three had nothing but the soil. When the crop was dug up, the plants over the cabbage leaves yielded about double the produce of the others.—*J. D. Parks*, Dartford Nursery, January, 1834.

The harvest throughout Great Britain has been extremely plentiful, and the quality equals the quantity.

Reading makes a learned man, writing a correct man, conversation a ready man, and thinking a great man.—*Lord Bacon.*

THE FARMER.

PUMPKINS.

FREDERICK COUNTY, Nov. 21, 1834.

To the Editor of the Farmer and Gardener :—

Sir,—I have deferred writing to you until this time, that I might be enabled to give you a more correct account of the crop of pumpkins raised by Mr. H. of Selbock, than I could from my own recollection of what I had heard of it. The land upon which this crop was raised, is alluvial, lying upon the Monocacy river, and separated from the main body of the farm by a long pond or swamp; the whole piece containing by estimate, 9 acres, 1½ acres of which are rendered unproductive by the trees which closely surround it. It was all in the spring of the year prepared and planted in corn, in drills 9 feet between the rows, and one half, or about 4 acres, planted with pumpkin seed among the corn, the residue was reserved for, and sown in turnip seed, in the space between the corn. The yield of his pumpkin crop was so great, as to induce him to keep an exact account of it, and the product was thirty-three ox cart and wagon loads, containing 4427 large pumpkins, and one wagon load of small and broken ones. The crop of corn was estimated at 70 bbls. or 350 bushels; he made no turnips in consequence of having procured seed that was neither turnip, radish nor cabbage seed, as I to my sorrow experienced, having obtained some of the same seed in Frederick town.

There are none of our farmers, I believe, who are ignorant of the value of pumpkins as food for cattle, or who do not know that they may be easily raised among their corn in nearly as great abundance, as if they were the sole possessors of the soil, without subtracting one iota from the product of the corn crop, yet how many are there who raise them for the purpose of feeding cattle, or for any other purpose? All soils that will yield 5 or 6 bbls. per acre, will produce fine pumpkins, and no crop can be cultivated, gathered and preserved, with so little expense and trouble. The cost of seed is too trifling to be estimated, the cultivation of the corn among which they grow, is all the care they require while growing, and when ripe you pick them up ready for use; of what other crop can the same be said? Our wheat, rye, tobacco and oats, demand undivided possession of the soil, and of care in their culture, and when they have attained their maturity, require much labour and expense before we can avail ourselves of the fruits of our labour; the grain must be cut and threshed; the tobacco, cut, housed and fired, stripped, bulked and packed, and the roots dug; while all the care and trouble the pumpkin asks, is, that you cast the seed in the ground in the spring of the year, and in the proper season pick up the golden fruit ready for use. The ease with which they may be produced, is not their only recommendation; every thing biped and quadruped will eat and grow fat on them, hogs, horses and cattle, geese, ducks, turkies and chickens, even fastidious man.

The care they require to preserve them is in keeping with their other qualities, thrown in a heap in a shed, or on a barn floor with a covering of straw or other loose litter to protect them from the frost, and they will keep like apples, furnishing you with delicious food for your stock of all kinds for one-third of the year, and at the very time they most want it, from December to the beginning of March.

Will our farmers who have not tried them be induced to make the experiment? I fear not—we are all too prone to travel the same road our forefathers trod, and to cultivate the same crops in the same manner, that we have been accustomed to see and practice from our boyhood.

I will save all the pumpkin seed I can, and send you what I may have to spare, and will also endeavour to procure you some from Mr. H.

You are at liberty to make what use you think proper of any part of this scrawl, with the exceptisn of my name, which I would rather should not appear. Very respectfully, yours, &c.

From the New-Hampshire Statesman.

The following article was presented to the *Merrimack Agricultural Society*, at their late meeting in Warner, by Mr. JAMES HALE, of Alstead, and received the Society's premium.

A DISSERTATION ON MAKING AND APPLYING MANURE.

It has been observed by a writer on agriculture, that manure stands in the same relation to the farmer which a stock of goods, calculated to meet the market, does to the merchant. Whether the comparison is correct or not in every point of view, it cannot be denied that manure is an article of the greatest importance to the farmer. It is the intention of the writer to present to the public, in a plain and concise manner, for the aid of the practical farmer, as well as to excite investigation, a few ideas on the subject of making and applying manure.

Making Manure.—This subject comprehends not only the best manner of saving and preserving the manure which is naturally made by a stock of cattle on a farm, but likewise the best method of increasing that quantity by the aid of other materials. The manure made in stables during the winter season should be cleanly thrown from the same every day, and the stable-floor well littered with straw or refuse hay. The litter, besides increasing the quantity of manure, conduces to the ease and health of the cattle, and increases both the quantity and quality of the milk of cows.—The cattle in the winter should usually be confined in the farm-yard, and the cows at least should be yarded during the night in the summer season. It is said by practical farmers that three loads of manure, kept under a cover through the spring and summer are worth four exposed to the air during that time.

The manure made by fatting hogs should be frequently cleaned from the hog house and placed in the yard adjoining, (no farmer should be without a hog-yard,) and the sty should be frequently replenished with plenty of straw or other litter.

But the thriving, economical and scientific farmer will not depend solely on the preceding methods for his stock of manure; but, for the purpose of increasing the quantity of the same, will frequently make calculations resembling some or all of those which follow; and not only make, but actually put them in practice; for, give me leave to observe, the calculations alone will make very little manure.

*The Farm-Yard.**—As soon as the haying and harvesting season is over, the farmer should commence collecting a large quantity of brakes, swamp grass, or coarse refuse grass of any description, and, after having removed the manure from his barn-yard, spread the brakes, &c. over the whole surface of the yard. There is no danger of getting this covering of too great a depth. It should be suffered to remain in this situation till next fall, when, together with the dung and urine of cattle with which it is mixed, it makes an excellent manure, and should be carted out and laid in large heaps, for the purpose of being placed in the hills of Indian corn or potatoes the ensuing spring. It is believed this is the most profitable method of making and applying such manure. If used the spring after it is made, it is not sufficiently rotted or decomposed to become the proper food of plants. It may be worth observing that the practice of covering the barn-yard with brakes is very beneficial to the cows kept in the yard during the fall season, and is equally as necessary as the stable-litter in the winter. These weeds are very injurious to our pastures, and every cutting tends to destroy them.

The Hog-Yard.—With a little labor much valuable manure may be made in this enclosure. It is strong, rich and oily, and the fermentation of it proceeds slowly, consequently it affords more steady and durable nourishment to the plants to which it is applied than most other manures, and answers a good purpose when mixed with a large quantity of earthy or vegetable substances.

For the purpose of increasing the quantity of this manure, the farmer should deposit in his hog-yard at every convenient opportunity, chip-dung, rich earth, weeds, leached ashes, leaves, moss, turf, and such other substances as his ingenuity may suggest; for no person should allow himself to be an entire book farmer, or servile imitator. That the mixture of the several ingredients may the more readily and efficiently be performed by the swine, a little corn or other grain should be sprinkled over the yard.

This is a good manure to enrich the exhausted soil of a garden, or to spread on land to be planted with Indian corn; but perhaps the best manner of applying it, is to cart it out every spring, and place it in the hills of Indian corn or potatoes. If the crop be not a good one where this manure is used, we must look for the failure from some other cause than the want of an excellent manure.

The Compost Heap.—Manures combined of different materials, and of such other substances as are calculated to act upon each other by fermentation or otherwise, are eminently useful in increasing the fertility of soils, and promoting the growth of vegetables.

Select some convenient spot not far distant from the back part of the house, or near the barn yard, and cart or place thereon, not in layers, but judiciously mixed or shovelled together, such

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*This enclosure is usually denominated by farmers a barn yard, and this appears to be the most proper designation; but most writers on agriculture call it a farm-yard.

substances as the following, viz: rich earth, such as may be obtained from ditches or the sides of the road; mud or the dirt from hollows, which have received the wash from rich lands; marle, ashes, oily substances, soot, putrified flesh, dead animals may be buried in the compost heap, if placed at such a depth as to prevent noxious effluvia; woollen rags cut in small pieces, scrapings of the cellar and kitchen yard, of lanes and back yards after rains, rubbish of old chimneys, earth that has been long under cover, salt, old brine, blood and soap suds. These should be frequently mixed together, and at each stirring much more common earth, or that which lies adjoining the heap, may be added. If this manure be designed for a cold, stiff, clayey soil, sand or dry sandy loam should be a principal ingredient; but if for open, light, sandy gound, clay should be added. It would be well to add to the heap some warm manure to promote its fermentation; sheep dung would be the best. Straw, refuse fodder, brakes, or any other such vegetables, would be better disposed of in the barn-yard than in this heap. The making of such a heap causes an appearance of neatness to exist about the house and other buildings; and besides being a rich manure, the removing of so much rubbish to its proper place is conducive to the health of the occupants or inmates of the house.

This is a good manure to spread on tillage land, just before sowing it with wheat or any kind of grain and hay seed. It should be covered in the soil with the harrow. It will cause the grain to grow luxuriantly, and the land seldom fails of being well stocked with grass. It may be profitably applied to gardens, and as a top dressing to wet, cold mowing lands.

Peat Moss or Swamp Mud.—This is a substance which yields little or no nourishment to plants unless it be mixed with barn yard or stable dung, or some kind of hot manure to bring it into a state of fermentation; in this case the mixture may be used in the same manner and nearly to the same effect "weight for weight" as barn-yard dung.

The cheapest and best manner of making this kind of compost manure is, when the barn yard dung is carried into the field, early in the fall, a certain quantity, say one half, or even two-thirds of the heap may be composed of swamp mud, which should be well mixed with the other manure. The whole mass at this time will undergo a strong fermentation, and become a good manure. Some practise carting swamp mud into the barn-yard; but in this case the two kinds of manure will not so well assimilate by fermentation, as when they are both moved at the same time and mixed together. The mud should be removed from the swamp, and left to dry some weeks before it is carried to the compost heap. I tried some of this compost in the hill for corn and potatoes, on a dry, warm soil; it consisted of nearly two-thirds mud; but with the corn, barn yard dung had the advantage, though in this case the mixture was probably beneficial.

Application of Manure.—In addition to what has been before remarked on this subject, some further observations will be made, founded on information derived from my own experience, the best authors, and the most intelligent agriculturists.

Stable dung or animal manure ought to be spread on tillage land designed for corn or potatoes the spring after it is made, and well mixed with the soil, by the harrow first, and then the plough. This mixture of the dung and soil should be performed immediately after the manure is carried from the heap to the field. If the small heaps are suffered to remain in the field during a fermentation, there is great loss of heat, of volatile, fluid, oily, and gaseous matter, by their dissipation in the atmosphere, which would, if the dung be speedily and properly buried in the ground, be communicated to the soil, thus securing to the plants the most nourishing properties, and the whole strength of the manure.

As it respects their speedy application, the same remarks apply to all kinds of manure, as well as to that of stable dung.

Some are of the opinion that stable and farm-yard manure ought always to be applied in a recent state, that is previous to their rotting or decomposition. In this case the manure must be spread on the land as above directed, as new dung will not answer a good purpose to place in the hill for Indian corn; and it is not so good on most soils for the potatoe hill, as that which is somewhat decomposed and rotten. Barn-yard dung may profitably be applied, as before observed, in the hills of corn and potatoes; and if so applied it should not be applied in a recent state.

With regard to the quantity of manure to be applied to an acre of tillage, many circumstances must be taken into consideration, such as the strength of the soil, the kind of grain or produce to be raised, (Indian corn requiring the largest quantity,) and the kind or quality of the manure to be applied. The farmer, in making his calculations on this point, should not apportion his manure to the quantity of ground he may wish to place under tillage; but should apportion his ground to the quantity of manure he can command. "Scanty dressings," as the term is, should ever be rejected. "We till too much land," is an expression in very common use; but instead of being a vague speculation of the brain, it should be reduced to the actual practice of the land.

In the application of manure, the quality of the soil and of the manure should be considered. A cold, stiff, clayey, or wet soil, requires a hot fermenting manure, and one not much decomposed, and that too in considerable quantity, that the cold nature of the soil may be corrected by the warmth of the dung; on the contrary, a dry, warm, sandy soil requires dung more decomposed and putrified, and a less quantity answers a good purpose. On such soils a compost of dung and peat moss, as before described, is a very suitable manure.

On the use and application of Fossil Manures, gypsum, lime, marle, clay, &c. much has been said by many writers on agriculture; but it is believed but little use has been made of their speculations, in this part of the country, except as it relates to the use of gypsum. Gypsum does not operate as an excessive stimulus to the soil, but as a direct food for the plants. It should be ground fine before application, "the finer the better;" it is then called Plaister of Paris. It is most beneficial to clover, and for this crop should be sowed in April, broad cast, after the rate of four bushels to the acre. When applied to corn and potatoes, it should be put into the hill at the time of planting. Warm, dry, sandy soils, receive the most benefit by the use of plaster. Should the farmer wish to try an experiment with this manure, a little of it sown on such land, newly stocked with clover, will test its usefulness. If sowed in a wet time, or just before a rain, the result is more perceptible, as it requires 500 times its weight of cold water to dissolve or decompose it.

Lime, as Sir H. Davy remarks, when slacked and exposed for some time to air, becomes combined with carbonic acid, and is then a useful ingredient in soils. Lime should never be mixed with stable or barn-yard dung, as it destroys much of their nutritive qualities. Rich loams abounding with vegetable matter, cold, boggy, swampy soils, are greatly improved by lime, as it accelerates putrefaction, and removes every thing noxious or hurtful for vegetation. A strong, clear, stony soil receives but little benefit by the application of lime. When applied it should be spread and ploughed into the soil. Its greatest effect is on wheat. But the large quantity of this article necessary to make a perceptible improvement in the texture or fruitfulness of the soil, renders it too expensive a manure for the greatest number of our farmers. On this subject an English writer* observes: "The general allowance, in the estimation of experienced farmers, should be at least three or four hundred bushels an acre."

Burnt Clay is used as a manure by some farmers with great success. The nature of clay is entirely changed by the process of burning; its tenacity and cohesiveness is destroyed, and it is rendered dry, warm and friable, and its cohesive property cannot be restored by the application of water; hence it makes a good manure for all cold, wet, compact, and particularly clayey soils; and greatly improves such soils, to which in its natural state its application would have been detrimental. Ten or fifteen cartloads is sufficient for an acre. It should be spread, and mixed with the soil by the plough or harrow. It makes a good top dressing for such cold, wet grass lands as cannot be profitably brought into tillage by the plough.

Should the farmer, like the professional man, the merchant and the ingenious mechanic, bring the reflecting powers of his mind to bear on his business and calling in life, and reduce to practice the theoretic investigations which would be the necessary result—a general system of neatness and order would exist about our dwellings, and our fields wear the appearance of luxuriousness and plenty.

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*Author of the Complete Grazier.

RIBBON GRASS.

PLAINFIED, Windham County, Con.

Dear Sir,—I received a letter from you, a short time since, requesting information concerning the ribbon grass, (Phalaris Americana.) The grass you saw at Plainfield, on Mr. Woodward's farm,

two years since, I was informed, originated from the ribbon grass. It was originally cultivated in the garden for ornament, where it spread, to the great annoyance of the vegetables. Mr. W., becoming dissatisfied with it, dug it up and threw it over the wall into the mowing lot, where it continued to grow luxuriantly. Being determined to get rid of it, he again took it up and threw it into the brook. It was so tenacious of life, that it seized upon the watery element and spread rapidly down the brook, so that in a few years it extended down the brook more than a mile; its progress towards dry land was more slow, but has eventually spread over a number of acres, converting a bog meadow into the best of mowing. Mr Bowen, who lived on the farm, informed me that he mowed it twice in the season, and that it produced about three tons to the acre, annually, of excellent hay, which the cattle consumed with as much avidity as any that was cut on the farm.

The meadow was so miry in many places, that cattle could not pass, but the grass roots formed such an impenetrable surface, that they could cart over it, in getting hay without difficulty; and, in some places, they entirely united across the brook, forming a natural bridge that a person might pass over. The brook is sufficiently large to operate a cotton factory which has been erected about a mile below.

I have taken considerable pains to ascertain the history, character and importance of the ribbon grass, and come to the conclusion, that it was originally an aquatic grass, and that the striped color was produced by being transplanted into a dry, gravelly soil. I have seen it in a number of places where it had been cultivated for ornament, spreading beyond its boundary and outrooting other grass; in these instances, if in the shade or on moist ground, it loses its striped color. In one instance, the roots passed under the garden wall into the back yard, and entirely eradicated the other grass, and occupied a number of rods of ground, when it grew rank and lost its striped color. I have not been able to ascertain the best mode of propagation; it produces little if any seed that will vegetate. The striped grass of the garden, I am confident, does not produce any; for we have cultivated it for near twenty years, and have never known a single spear that was produced from seed. The Phalaris that grows in wet land, blossoms abundantly, but produces very little seed, and that is liable to become fungus, resembling the spurred rye. The propagation by transplanting the roots into wet land among the bogs, although attended with but little labor, must take considerable time to entirely eradicate the bog grass, as I have proved by experiment. I transplanted, a number of years since, into a bog meadow, some of the grass, and although it took root and grew rapidly, spreading among the other grass, and even sending up shoots in the centre of bogs, still the bog grass remains. I planted, as an experiment, about one-half of an acre of bog meadow with the Phalaris a year last spring, it having been previously ploughed for two or three years; it was planted four feet apart each way; it all lived, and is spreading well, and probably in a few years will occupy the whole ground. I have ploughed up one acre more, and intend to plant it in the same way. I also sowed some of the seed last spring, procured from grass that grew on wet land, but am not certain that any of it has come up. Shall sow more next spring, and hope in a few years to be able to ascertain its importance, and the best mode of cultivation.

Yours, with respect,
ANDREW HARRIS.

Hon. Elizur Goodrich, Jr.

THE BREEDER & MANAGER.

[From the Farmer's and Grazier's Guide.]

Of the proper treatment and food of Neat Cattle *generally, and of cows in particular.*

The profit and advantage that are to be derived from the keeping of neat cattle, or from the produce of the dairy, depend greatly on their treatment and management. Soil has a sensible effect on the quality of the pasturage, and this also operates similarly on the animals which graze thereon. In Exeter, the butter is excellent, but the cheese the worst in the kingdom; while in Somersetshire the reverse is the case;—the cheese there manufactured is of a very superior quality while the butter is uniformly indifferent or bad. The richness of the butter made in Scotland, is generally attributed to the cows feeding upon the sweet and short pasture in the glens; the soils of other parts of the kingdom have also a similar effect on the animals fed thereon; but, generally speaking, old pastures are the best; new laid ones being often productive of disease.

In natural pastures, there is usually a sufficient variety of good herbage; and if the animal be allowed to rove about, it will select such only as instinct points out to be proper, or agreeable to its palate; and in doing this uses such a degree of exercise as is conducive to health and perfect digestion. This is almost invariably the case where the animals are inured to the soil and climate; but when the farmer or dairyman is obliged to have recourse to artificial food and confinement, the animal becomes essentially different: an unlimited quantity of food is a temptation which few animals can withstand; and when it is not accompanied with a due portion of exercise often proves of bad, if not of fatal consequences. It is a fact, equally applicable to the brute, as it is disgraceful to the human being, that where the inordinate appetite for food is indulged, an inclination or sensation of thirst, is invariably felt; and that by freely indulging in either extreme, a capability for extension of appetite is engendered, which soon paralyzes the powers of the digestive system, and produces a train of disorders injurious to the whole animal economy in their existence, and totally destructive in their effects.

When neat cattle, but particularly cows, are brought from a distant county to the farm or dairy, they will require particular care and attention until accustomed to the soil, food, and other local circumstances connected with their new residence. If they have travelled far, they should, at first, be put into the stable, or cow-house, and allowed a large quantity of litter, but must be taken out of the stable several times a day, for the benefit of fresh air. They should also be well rubbed and brushed all over the body, particularly about the joints; and if they seemed fatigued, their legs may be rolled in bandages kept wet with warm water, in which a little vinegar has been mixed.

They must not be put too quickly upon any particular diet; but gradually inured to that system of feeding which it is intended they shall follow. At first, food that is easy of digestion, is decidedly the best; and if cooked, it will be better still. Too much must not be given at any one time; let them have it in small quantities, and frequently. The water which they drink should, at first, have the raw chill taken off, and a little bran or meal may be put in it, together with a small quantity of salt.

If either of the cows should be near calving, let her be bled, but not too profusely; this will render her calving more easy, and less liable to accident.

To render this important part of our subject clear and distinct, we shall divive it into the folfowing general divisions—

I. The cow-house, or stable.
II. The necessity of dressing and cleaning.
III. Foddering, or feeding.
IV. Water.

I.—*Of the cow-house, or stable.*

The most healthy stables are those which are open to the east, or have an eastern aspect, and are built on a dry and elevated situation. It is a common practice to build them too close; and it is an equally erroneous opinion, that cold is injurious to cows, or that they should be carefully guarded against it: this opinion is productive of many of the worst disorders with which they are afflicted. The cow-house is, in general, not only very low, and with narrow openings, but it is also shut up closely as possible, if the weather happen to be a little severer than usual. A more pernicious or fatal practice can scarcely be conceived. Experience has proved that cows kept in the open air, without the slightest shelter, suffer but little inconvenience, except in damp or wet weather; it is better, no doubt, to keep them in a more sheltered situation; but the stable should never be completely closed up, however cold the weather may be, although it is desirable that strong draughts of cold or damp air should be guarded against, especially in winter. It may be held as a general rule, that the stable is too close, when, on entering, the breath is affected, or any smell of urine can be perceived.

If it be important to keep cow-houses or cattle stables well ventilated, it is no less so to keep them clean. Dung, if left therein, soon renders the air unwholesome, and engenders a train of putrid disorders. Cows in a stable should not be too close—a square space of six feet each way should be allowed to each cow. Two or three ventilators near the ground on the north side, affords, at a trifling expense, an excellent way of renewing or sweetening the air in stables in the summer time; and on the south side, in the winter, without occasioning draughts; and these may be shut when necessary, either by means of straw or otherwise. The ground of the cow-house should be of brick work or stone; with the sides elevated just sufficient to cause it to drain towards the middle, where there should be a gutter, to carry off the urine and excrement, and convey them into a water-tight tank, or at all events, into a large

covered hole on the outside; and by no means, as is too frequently the case, into an open ditch, on the outside. By these simple means, the animals and their habitations may always be kept clean and sweet.

The Dutch and Flemish cow farmers keep their farms in a state of the greatest neatness; and by pursuing a systematic plan, obtain full three times as much manure as the English farmers do, being generally able to produce sufficient to dress the whole of their lands every year.

The preparation of manure being very imperfectly understood in this country, and as many of our farmers throw away or are annoyed by what is a source of wealth to the Dutch and Flemish farmer, we shall give an outline of the mode pursued.

To accomplish this important end, they are very careful to make, at the back of their stable and cattle sheds, a large round hole of about three feet deep, and capacious enough to contain one month's dung; the sides and bottoms of this are built water tight of brick clinkers, or stones. The floors of their stables and cattle-sheds are also made hard, dry, and water-tight, with water-tight drains to lead to another pit made in the same manner, also at the back of the shed at a few yards from, and of a similar size, to the dung-pit; so that all the liquid manure necessarily runs from the stalls into this cesspool or tank;—to this place also drains are made from the privies, and from the sinks in the kitchen and washhouse; so that every drop of soap suds, wash, and all dirty and refuse water, finds its way to the cesspool; but which is never allowed to run over.

The fields of corn stubble, and the second year's grass land, whether of clover, ray-grass, or sinfoil, are carefully pared into thin clods: these clods, containing a portion of the roots of the plants which have before been harvested from them, and much garden mould, become useful auxiliaries to the straw, bean haulm, and any other waste produce, capable of being dried for bedding, and spares the use of those materials, which if solely applied would require half the land of the farm to supply. This refuse, together with the parings of their lanes, the edges of their walks, and sides of their hedges, are dried, and then carried to their barns, where they are piled in a kind of stack, and portions of it are carried daily as it may be wanted for bedding into the cattle sheds.

The bedding of the cattle is made with fresh clods every morning and evening; that part which had been under the heels of the cow is every morning thrown under her fore feet, and that which was under her fore feet, is thrown into its place; and fresh clods, about one hundred and fifty pounds weight, is added to the bedding, and then straw, or other dry vegetable produce is strewed over that;—the same is also done every evening. The sheep and pigs are only supplied with fresh bedding once a day. The bedding lies under them seven days and seven nights, when the stalls are cleaned out, and the dung conveyed into the dung pit at the back of the cattle sheds, where it lies till it has had the four weeks' dung thrown into it.

This mass is thus composed of portions of manure which have laid in the dungpit four weeks, and upon which all the ashes and sweepings of the house and premises are thrown daily. The reservoir, or tank, into which all the drainings of the stables, &c. are conveyed, and which is necessarily contiguous, is, every other day, if not full enough, made so with water, and after being stirred up, is thrown with a scoop over the heap of dung. Now as this heap contains four weeks' dung, fourteen wettings with such rich fermenting liquid more than doubles the value of the whole heap for agricultural purposes.

At the end of the fourth week, the dung hole, or dung pit, is emptied, by which means the pit's contents is again turned over, and its most rotten parts brought to the top. It is now formed into a heap from three to five feet high, and carefully covered with sods; by this covering, the heat and goodness of the dung is prevented from evaporating, and the rain water is kept from penetrating into it, which would otherwise check its fermentation. When the heap has lain and fermented during two or three months, it is carried to the fields to be manured with it, and the sods which covered it to keep in its warmth, are thrown into the bottom of the dung pit, where they lay and become excellent manure.

The quantity of cattle kept upon most Dutch farms, is at the rate of five cows or fifty sheep, to every twenty acres of land; and the quantity of manure produced is from ten to twenty tons per acre, annually.

Pigs, rabbits, and poultry, should also be kept away from the stable; as they tend to make it very unwholesome. The dust of the threshing and winnowing also will get into the stables, if too close to the barn; and, if too continually inhaled by the cows engender consumption.

We have said, that it is an erroneous opinion, that cold is injurious to cows, and that some of the worst disorders with which they are afflicted are attributable to the effect produced by this opinion. This may appear rather problematical to dairymen, or to farmers who keep cows for their milk; for their daily observation induces the belief, that the secretion of milk is most abundant in cows that are sheltered from the weather; many, therefore, shut up the stable, and even deprive the animals of light and almost of air during a considerable part of the year. Were they, however, to place in their account against this supposed increase of produce the expense of purchasing fresh cows, to replace those that have been, we may almost say, suffocated; they would find their gain to be in an inverse ratio to what they had supposed; and then, perhaps, they might be induced to abandon this pernicious practice, and suffer their cows to feel the truly beneficial effects of light, and sweet and wholesome air.

A stable or shed for cows should be so formed that a space twenty-four feet in length should be allowed to every four cows, and so in proportion for any further number; the floor should be placed above the level of the ground, the sides slightly elevated, so that all moisture may run off to a drain in the middle, which should be conducted to a covered pit on the outside of the building. The place should be lofty; and to secure a free circulation of air, two windows to every twenty-four feet will be necessary.

The stores for the fodder should be separated from the stable or shed by a brick or stone wall, if adjoining thereto; but if over the stable, by a brick or tile floor, which by its compactness keeps the dust and noxious fumes from the food.

Every precaution should be taken to keep the place clean and wholesome; and in this respect, it may not be amiss to imitate the practice of the Dutch cow-keepers, who are as careful to keep their cow-houses sweet and clean as the English gentleman is in managing his stable.

THE GARDENER.

From the Young Gardener's Assistant.

OBSERVATIONS ON INSECTS AND DISEASES TO WHICH FRUIT TREES ARE LIABLE.

Much may be written relative to the various diseases to which fruit trees are liable, and also to the prevention and destruction of the various kinds of reptiles and insects which very frequently deprive us of the first fruits of our garden.—The preventive operations are those of the best culture. Fall ploughing, by exposing worms, grubs, the larvæ of bugs, beetles, &c., to the intense frost of our winters, and the moderate use of salt, lime, ashes, &c. are beneficial. Insects may be annoyed, and sometimes their complete destruction effected by the use of soap-suds, ley, tar, turpentine, sulphur, pepper, soot, decoctions of elder, walnut leaves, tobacco, and other bitter and acrid substances; but perhaps the most effectual way of keeping some of the most pernicious kinds of insects under, is to gather up such fruit as may fall from the trees, before the insects have an opportunity of escaping into the earth, or to other places of shelter.

Where trees are planted in a bad soil or unfavourable situations, they often become diseased; when this happens, the best remedy is good pruning, and keeping the trees clean, by a free use of soap and water. If that will not do, they may be headed down, or removed to a better situation. Barrenness and disease are generally produced by the bad qualities of earth and air, by a want of water, or by the inroads of insects. These incidents generally show themselves in the early part of the year. Leaves and shoots of any colour but the natural green; curled and ragged leaves; branches in a decaying state; shoots growing from the roots, instead of from the stem or trunk; the stem diseased in its bark, and gum oozing from various parts thereof, are all proofs of the existence of disease.

The Peach tree is subject to a disease called the yellows; and the discoloured leaves and feeble branches are often ascribed to the worms which so frequently attack the root; where these are found, they may may be removed by a knife or chisel; but if it should appear that the tree is diseased, it should be removed, to prevent other trees from being infected. The Pear, and also the Quince, and sometimes other trees, are subject to the fire blight; this malady may be completely checked on its first appearance, by cutting off and immediately burning the injured branches. Generally speaking, careful pruning, cleaning the bark all over with a brush, applying soap or tobacco water to the leaves, and occasionally putting good earth and good manure to the roots, will remedy most diseases in fruit trees; removing them from a bad to a better soil will, of

course, effect this, where it proceeds from poorness of land; for the old adage, "remove the cause, and the effect will cease," will be here exemplified. To cure the oozing of the gum, nothing more is necessary than to cut away the diseased parts of the bark; and by thus assisting nature in casting out the excrementations, or noxious juices, a complete cure may be effected. When a tree is affected by mildew, let it be immediately sprinkled with soap suds, and then be dusted over with sulphur and tobacco dust, or snuff; at the same time, dig around the tree, and examine the soil, and sub-soil; if it be wet and cankery, it should be taken away, and replaced with good healthy soil, and the ground drained; if on the contrary, the ground be dry, give it a plentiful watering; the same remedy may serve as a preventive of the extension of blight, if taken in time. When any canker is observed, the part affected must, at the winter pruning, be cut clean out, and the part thus dressed be pared, so that no water be able to lodge in the wound; when this is done, let a quantity of soot be mixed up with the water, after which, let a little train oil be worked well amongst it, but so that the mixture finally remain stiff; this may be plastered over all the wounds that have been pruned. The application of this mixture keeps out the wet from the wounds, where it would be likely to lodge, and both the soot and oil promote vegetation. When trees are cankery from having a bad sub-soil, it is in vain to apply any remedy till the ground is properly drained, and some fresh soil be mixed with the natural soil, also the tree replanted. When trees are known to be so situated as to be particularly liable to the attacks of insects or disease, they should be attended to at the time of winter pruning, in order to destroy the insects in their larvæ state.

The following compositions have been known to protect fruit trees from the attacks of numerous insects, by being used as a wash to the trees immediately after the winter pruning. The constitution of some trees will bear a much stronger mixture of ingredients than others; but the proportions, as hereafter described, will not be injurious to any, but will be effectual in the destruction of the larvæ of insects.

For Apricot, Nectarine, and Peach Trees.—To 8 gallons of water add one pound of soft soap, 2 pounds of common sulphur, and half an ounce of black pepper.

For Apple, Cherry, Pear and Plum Trees.—To 4 gallons of water add one pound of soft soap, 2 pounds of common sulphur, 2 ounces of tobacco, and one ounce of black pepper.

For Figs and Vines.—To 4 gallons of water add half a pound of soft soap, one pound of sulphur, and a quarter of an ounce of black pepper.

All these ingredients must be boiled together for 20 minutes at least, and when in a lukewarm state, applied to the bark of the trees with a suitable brush.

The most destructive enemy to our fruits, is the Curculio; this insect passes the winter in the earth in a chrysalis state, and if suffered to remain unmolested by the gardener, will be ready to commence his attacks at about the time the blossoms appear on our fruit trees. The eggs are deposited in the Apple, Pear, and all stone fruit, at a very early stage of their growth; these eggs soon hatch, and small maggots are produced, which exist in the fruit, causing it to drop off prematurely, with the little enemy within; if this fruit be gathered up, or immediately devoured by hogs, geese, or other animals, a check may be put to their ravages in succeeding years, but if suffered to remain on the ground, they will supply food to myriads of the destructive race, which may not be so easily extirpated. The canker-worm is another enemy to our fruits, for the destruction of which many experiments have been tried. Some apply bandages round the body of the tree, smeared over with tar or ointment, to annoy or entrap the females, in their ascent to the tree; but as these tormentors are frequently on the move from November to the end of June, this must be a very tedious, as well as uncertain process. As this insect is supposed to exist within four feet of the trunk of the tree, and not more than three or four inches from the surface of the earth, good culture, and a moderate use of lime, ashes, or any other pernicious ingredient, is the most likely way to destroy them. The Bark-Louse is another pernicious insect; they resemble blisters, and are so near the colour of bark as to be imperceptible; they often prove fatal to the Apple tree, by preventing the circulation of the sap. These insects may be conquered by washing the trees with soap-suds, tobacco water, lime water, or brine, or a wash may be made of soapy water and lime, thickened to the consistence of cream or paint, with sifted sand or clay, which may be applied with a brush to the trunk and limbs of the trees; this should be done at the latter end of May, or early in June, and the cracks in the bark should be completely covered.

The Apple tree Borer is said to deposit its eggs beneath the surface of the soil, and the worms are often to be found in the spring of the year, by digging round the tree, and clearing away the earth to the roots, and may be taken out with a knife or gouge and destroyed. After the worms are removed, the wounds should be covered over with grafting clay and wood ashes mixed, and the earth then returned to the roots of the tree. Some use bricklayers' mortar early in the spring, around the base of the tree, so as to cover the part where the deposit is made, and prevent their attacks.

Although our limits will not allow of a further description of the various sorts of insects which injure our gardens, and frequently destroy the first fruits of our labour, I cannot forbear directing the attention of our citizens to the importance of saving all kinds of ashes. If all agriculturists and horticulturists were to offer an inducement to the inhabitants of large cities to save their ashes in a dry state, they would be supplied not only with a valuable manure, but an antidote for many kinds of insects; and our citizens would be at less risk from fire, by having a brick vault on the premises for safe keeping them. In England, a private dwelling is not considered complete without an ash vault, and a good farmer would dispense with his barn, rather than be destitute of an ash-house. I have known farmers supply the cottagers with as much peat as they could burn, on condition of their saving them the ashes; and there are some that will keep men under pay throughout the year, burning peat for the same purpose; and any thing that has passed the fire is so valuable, that a chimney-sweep will frequently clean chimneys for the sake of the soot, which is conveyed miles into the country, and sold at a price sufficient to reward the collectors, besides paying all expenses; even the house-keepers' ashes in cities is a marketable article at all times, at from ten to twenty-five cents per bushel, when kept dry and clean, and a guinea a load was formerly the common price in the villages in Berkshire and Hampshire.

While on this subject, I would urge the importance of a spring dressing of ashes. If cultivators were to prepare turfs from tanners' bark, peat, earth, coal dust, mixed with clay, cow dung, &c., and get them dried in the summer season, these, by being preserved through the winter, may be burned around fruit orchards, while the trees are in blossom, and if the fires are properly managed, a smoke may be kept up, by heaping on damp litter every night; this will prove pernicious to such insects as may reside in the trees, and the ashes being spread on the ground, will serve as an antidote for the destruction of others. An Orchard thus managed every year, will need no other manure. The smoking should be effected first on one side of the plantation, and afterwards on the other, or heaps may be prepared in different parts of the Orchard, and fire applied according as the wind may serve, to carry the smoke where it is most necessary. I know a gardener in the neighbourhood of New York, who saved his Plums and Nectarines by burning salt hay, after its having been used as a covering for his Spinach; and I have no hesitation in recommending it as an excellent remedy for securing fruit trees from insects, especially if some coarse tobacco could be procured to add to it. The damper the materials are, in moderation, the more smoke they will create; and if a little tar, pitch, sulphur, or other pernicious combustible be sprinkled amongst them, it will be beneficial.

MISCELLANEOUS.

FLORIDA.

Washington City, Oct. 1834.

Sir: In answer to yours of the 20th ult. and agreeably to the request contained therein, I take up the pen to give you a short account of the part of the Territory of Florida in which I have resided for the last ten years.

The Tallahassee country properly so called, is situated near the bend of the Apalachicola Bay, and ranges from East to West, and 17 to 20 miles distant from the Gulf of Mexico. It has an elevation of 250 to 300 feet above the sea in the short distance above mentioned, and contains an area of about 20 miles wide by 80 in length, extending from the Ocklockony river to the Suwanee, and following the bend of the gulf. This elevated surface of area contains almost every variety of soil of a good quality as contradistinguished from poor land or pine barren. We have deep, rich live oak hammock, and we have oak and hickory, interspersed with dogwood; we have rosemary pine, black oak, and magnolia granda flora, all intermixed and growing together

in the same spot, and we have also rich mulatto and chocolate pine land. It is difficult to say which of these is preferred, because they have all, as yet, produced equally well. The soil of the above lands is based upon a deep substantial clay, which in many places goes to the depth of 25 to 30 feet. The face of this table land is rolling, inclining to the champaign, and beautifully diversified with little eminences and gradual slopes, forming fine sites of building and farming ground. It has upon it numbers of small lakes of the purest spring water, full of excellect fish, such as trout, cat, brim, perch and other small pan fish, and soft shell turtle. In the winter and fall seasons their surface are covered with wild ducks, brant and geese. There is to be found in the woods, abundance of game, such as deer, rabbit, turkey, partridge, woodcock and English snipe, also, wild pigeons, which make us a periodical visit, once every fourth year.

This whole table of land lies in latitude 31, or thereabout, and possesses certainly the most delicious, as well as the most healthy climate in the United States. Its great elevation places it out of the reach of the excessive heat of summer, and its low latitude precludes all the rigor of a northern winter. Indeed, in two or three instances of my residence there, we had no frost during the winter. We usually look for two or three slight frosts about the 15th to the 20th of November, and never expect any more until the 15th to the 20th of December. This period until the 15th or 20th of January, is looked upon as the regular season of frost; but is frequently so light as hardly to kill the sweet potatoe vines. Of late years however, the weather in the month of January has been somewhat colder, and even ice has been found as thick as a dollar. The winter usually breaks up with a rainy season, which lasts eight or ten days. When this is past, our planting operations for the ensuing year commence anew: Our grounds are cleared up for corn and oats, or furrowed for cotton, which last we do not plant until the latter end of March or 1st of April.

Our corn planting is generally divided into three batches; one-third in February, one-third in March, and one-third in April. It has also become a custom with many of our planters to plant a few acres of corn for roasting ears on the memorable *8th of January;* the produce of which, if it escapes the frost in January, will be fit for use about the first of May.

We generally grow two kinds of cotton, short and long staple; or common or green, and sea island or black seed. A few experiments have been made with the Petit Golphe, and it has acquired great repute. It has been generally supposed that the sea island or black seed cotton would succeed only in low lands and sea islands, under the idea that it required a soft, loamy, silicious soil, yet we present the singular paradox of its successful cultivation on an upland region whose base is essentially argillaceous. But the solution is made easy by a recurrence to the topographical features of the Tallahassee region.—I have stated above that the table land, comprising an area of 20 by 80 miles, emphatically called the Tallahassee country, has an elevation of 250 to 300 feet above the level of the sea, following the meander of the bay of Apalachi and Gulf of Mexico, and distant only 18 to 20 miles from the sea, (a feature which will not be found to exist on the whole line of sea coast from Cape Sable to the Neversink Hills in New Jersey,) and consequently enjoying the benefits of the sea breeze in all its purity and vigor.

It has, therefore, become a datum in the science of cultivation of this valuable and important staple, that the saline properties of the atmosphere are essential to its fructification, and although it has been planted in the uplands of Georgia and South Carolina, and promised very fair, and became a thrifty and vigorous plant, its produce was a mere abortion. This saline property in the atmosphere of this elevated region, places the sea island or long staple cotton in the first rank among the agricultural products of Florida.

The sugar cane has been, and is cultivated with considerable success, but the establishment of sugar houses, mills, &c. requires so much capital, that few have, as yet, gone properly into the business, to enable them to reap large profits. Almost every cotton planter, however, has a small sugar house and mill, sufficient for the manufacture of a few acres of cane, which he plants for the use of his own family and negroes, which, I assure you, is not only a great saving, but a comfort and a promoter of health in a family. I have made as good sugar, in this small way, as I ever saw in any country.

With regard to the price and value of our lands, I find it difficult to answer your query, as they depend so much upon a variety of circumstances, such as locality, neighborhood, quantum of clearing, buildings, and other improvements. Improved lands have sold from 5 to $10 per acre.—There are lands still belonging to the United States, which are subject to entry at $1 25 per acre, situated on the above mentioned table land, but rather remote from Tallahassee, but at the same time nearly equi-distant from St. Marks, (20 to 25 miles,) a port of entry and delivery, to which all our produce is transported for exportation.—A good test of the value of cleared land may be given in the price of rent. I have a plantation 3½ miles from Tallahassee, and 16 from St. Marks, upon which are cleared 200 acres, for which I get $3½ per acre. There is no part of the Southern States, where a planter may realize more money by his negroes. I have known seven bales of cotton made to one hand on one plantation; but this is rare, five bales being the ordinary product of a full sized able bodied negro, besides a sufficient quantity of corn for his own and master's consumption. We usually plant five acres of cotton, 20 acres of corn to the hand, besides potatoes and sugar cane for plantation use.

We have two Banks at Tallahassee, one of which has been in operation for two or three years, and still continues to redeem its bills and maintain its credit. The other, called the Union Bank of Florida, it is expected will be in operation about the 1st of January next. This has a capital of *two millions of dollars:* one million of which has been paid in, having been borrowed from capitalists in New York and Philadelphia.—This Bank will lend money on real estate or negroes, or both, upon the simple note of the borrower, renewable once a year only. Its resources are very great, and all planters, who have real estate or negroes in Florida, may obtain two-thirds of their value, for their present use and accommodation, by placing them in mortgage in the Bank at the extended time of 21 years. When this fact becomes known, there is no doubt that the other superior advantages, enumerated above, possessed by this country, will induce a rapid emigration, and introduction of this species of property.

You ask me "What sort of people have generally emigrated, and compose what is called the society of the country?" There is no query that you have proposed to me that I shall take greater pleasure in answering. To you, who are a good judge of these matters, and are well acquainted generally with the "*gens comme il faut*" in the United States, I have only to enumerate a few of the settlers from each of the States, who have taken up their abode and cast their lots in this charming country. We have the Randalls, the Wirts, the Dorseys, the Craigs, the Wellfords, the Willis's and the Ringgolds, from Maryland; the Cabells, the Barbers, the Taliaferros, the Bradens, the Browns, the Fauntleroys, the Jones's, the Prestons, the Gamble's, the Randolphs, the Eppes's, and the Washington's from Virginia; the Sheppards, the Nutalls, the Allstons, the Parishes, the Croomes, the Greens, the Macons, and the Branches, from North Carolina; the Gadsdens, the Holmes's, the Prioleaux, and the Seabrooks, from South Carolina; the Waltons, the Savages, the Wycoffs, and the Berthelotts, from Georgia; the Butlers, the Williams's, and the Calls, from Tennessee; the Blairs, the Greenups, the Adairs, the Whites, and the Duvals, from Kentucky; the Floyds, from Indiana; the Worthingtons, from Ohio; and Princes of the dynasty of Napoleon, and Ex-Counts of Louis XVIII. and Charles X. and members of the Legion of Honor, and citizens of France, settled under the auspices of Lafayette on his own land—all this being a well educated and genteel people, who have travelled much, and seen a great deal of the ups and downs of life, imparts to our society a relish and tone, which I will venture to assert, is not equalled by any newly settled country, and probably not surpassed by any in the United States. In fact, having within ourselves all the materials, education, urbanity of manners, and chivalric feeling, united to moderate affluence, it is no wonder that our society has so justly acquired a character for its taste, elegance, and refinement.

Need I state how much pleasure it would give me, to add to the list of those distinguished families from Maryland that of ———, a name so identified with our early struggle for independence, so venerated for its patriarchal dignity, and so intimately associated with all our ideas of worth, excellence, and virtue.

I have the honor to be, with great respect, your obedient servant. LOCH-A-CRAY.

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BALTIMORE PRODUCE MARKET.

☞ *These Prices are carefully corrected every* MONDAY.

	PER.	FROM	TO
BEANS, white field,	bushel.	——	3 00
BEEF, on the hoof,	100lbs.	5 00	5 50
CORN, yellow,	bushel.	53	55
White,	"	53	55
COTTON, Virginia,	pound.	13	15
North Carolina,	"	14	16
Upland,	"	16	18
FEATHERS,	pound.	37½	40
FLAXSEED,	bushel.	1 60	1 62
FLOUR—Best white wheat family,	barrel.	6 25	6 75
Do. do. baker's	"	5 75	6 25
Do. do. Superfine,	"	4 75	5 00
Super Howard street,	"	4 88	5 00
" " wagon price,	"	4 75	——
City Mills, extra,	"	5 12	5 25
Do.	"	4 87	5 00
Susquehanna,	"	5 25	——
Rye,	"		——
GRASS SEEDS, red Clover,	bushel.	5 00	5 50
Timothy (herds of the north)	"	3 00	3 50
Orchard,	"	3 00	3 50
Tall meadow Oat,	"	2 00	2 50
Herds, or red top,	"	1 25	——
HAY, in bulk,	ton.	15 00	——
HEMP, country, dew rotted,	pound.	6	7
" water rotted,	"	7	8
HOGS, on the hoof,	100lb.	4 87	5 00
HOPS—first sort,	pound.	15	——
second,	"	13	——
refuse,	"el.	11	——
LIME,	bush	30	33
MUSTARD SEED, Domestic,	"	5 00	6 00
OATS,	"	30	32
PEAS, red eye,	bushel.	60	——
Black eye,	"	87	1 00
Lady,	"	100	——
PLASTER PARIS, in the stone,	ton.	3 12	——
Ground,	barrel.	1 37	——
PALMA CHRISTA BEAN,	bushel.	1 50	1 56
RAGS,	pound.	3	4
RYE,	bushel.	67	69
TOBACCO, crop, common,	100 lbs	4 00	5 00
" brown and red,	"	5 00	7 00
" fine red,	"	7 00	9 00
" wrappery, suitable for segars,	"	6 00	12 00
" yellow and red,	"	8 00	12 00
" yellow,	"	13 00	17 00
" fine yellow,	"	15 00	25 00
Seconds, as in quality,	"	3 50	5 00
" ground leaf,	"	5 00	9 00
Virginia,	"	4 00	——
Rappahannock,	"	——	——
Kentucky,	"	4 00	9 00
WHEAT, white,	bushel.	1 03	1 09
Red,	"	95	1 00
WHISKEY, 1st pf. in bbls	gallon.	32	33
" in hhds	"	——	30
" wagon price,	"	28	28½
WAGON FREIGHTS, to Pittsburgh,	100 lbs	——	1 37
To Wheeling,	"	——	1 75
		washed.	*unwash*
WOOL, Prime & Saxon Fleeces,	pound.	50 *to* 60	24 *to* 26
Full Merino,	"	44 50	22 24
Three fourths Merino,	"	37 44	22 24
One half do.	"	33 37	22 24
Common & one fourth Meri.	"	30 33	20 22
Pulled,	"	31 33	22 24

PUPPIES.

SEVERAL YOUNG POINTERS of the very best blood, will be old enough for sale, early in November. Also several young GREY HOUND sluts, from the pair sent from Europe to the president of the U. S., and by him presented to this establishment last fall.

Also one SLUT, one year old, from my grey hound slut, by a very fine imported Pointer. She appears to have the Pointer's nose and the shape and agility of the greyhound—color black. Oct. 7.

BALTIMORE PROVISION MARKET.

	PER.	FROM.	TO.
APPLES,	barrel.	$3 00	$4 00
BACON, hams,	pound.	11	——
Shoulders,	"	—	10
Middlings,	"	——	10½
BUTTER, printed, in lbs. & half lbs.	"	25	37
Roll,	"	15	25
CIDER,	barrel.	4 00	5 00
CALVES, three to six weeks old	each.	4 00	7 00
COWS, new milch,	"	22 00	30 00
Dry,	"	9 00	12 00
CORN MEAL, for family use,	100lbs.	1 56	1 62
CHOP RYE,	"	1 56	1 62
EGGS,	dozen.	19	20
FISH, Shad, salted,	barrel.	5 75	6 00
Herrings, salted, No. 1,	"	4 75	——
Mackerel, No. 1, 2 & 3,	"	4 87	6 75
Cod, salted,	cwt.	2 50	3 00
LAMBS, alive,	each.	1 25	2 00
Slaughtered,	quart'r	31	50
LARD,	pound.	10	12
ONIONS,	bushel.	62	75
POULTRY, Fowls,	dozen.	——	2 50
Chickens,	"	1 75	2 00
Ducks,	"	——	2 50
POTATOES, Irish,	bushel.	50	62
Sweet,	"	62	75
TURNIP,	"	37	50
VEAL, fore quarters,	pound.	7	——
Hind do.	"	8	——

ADVERTISEMENTS

BEARING GRAPE VINES.

A GENTLEMAN in the vicinity of Baltimore removing from his present residence, is taking up a few of Herbemont's Madeira Grape Vines, three years old last spring. They are remarkably fine vines, which he had planted in his garden for his own use. They bore their first crop of fruit the past summer, and are now in fine order for transplanting. Persons wanting such vines can be supplied with them at from 75 cts. to $1 each, by applying at the American Farmer Seed Store, in Calvert street, to I. I. Hitchcock, who will show a sample of the vines, and pack in the best manner any that may be ordered at a distance. nov 25

GRAPE VINES.

HERBEMONT'S Madeira, one, two, three and four years old, from 25 cents to $1 each.
Isabella, two and three years old, at 25 to 50 cts each.
Catawba, one year old, 25 cts. each.
White Scuppernong, two years old, at 37½ cents each.
Sultana, one year old, at 50 cts. each.
Woodson, two years old, at 37½ cents each.
Red Bland, one year old, at 25 cts. each.
Are for sale at this establishment, and will be well packed to go any distance. no. 25

GRAPE VINES.—The subscriber will receive orders for VINES from Mr. Herbemont's Nursery, till the 15th of November.

For extensive cultivation in this climate there is no grape so valuable as the Herbemont. But little inferior to many esteemed foreign varieties for the table, it is equal to any of them as a Wine grape, and surpasses them in the important qualities of abundant bearing and resistance of frost.

Persons in any part of this State, the District of Columbia, and in some parts of Virginia and Pennsylvania may avail themselves of this agency.—Price in Baltimore for 1000 Vines, $100; for 500, $62 50; for 100 do $15.
Oct. 28 4t. G. FITZHUGH, Jr.

WESTPHALIA GEESE.

A FEW pairs of these very superior Geese are now ready for delivery at 5 dollars a pair. Apply to I. I. HITCHCOCK,
no 18 Amer. Far. Estab.

GAMA GRASS SEED

JUST received, and for sale at this Establishment—Price 50 cents per ounce.

PEA FOWLS.

ONE pair 2 years old, and one pair 3 years old, for sale at this establishment. Price $3 a pair. no 4

AGENCY FOR TREES, &c.

THE subscriber respectfully offers his services to his customers and the public generally, as agent for the procurement of Fruit and other Trees. It may not be generally understood or duly considered, that few nurseries contain *all* kinds of trees in equal perfection. One, for instance, is celebrated for its fine apple trees, another for its peaches, and a third for its plums or pears, while scarce any of them can make up a collection of *all kinds* of trees of the best quality. In this respect the subscriber flatters himself that he possesses peculiar advantages. His own nursery is not extensive or forward enough to afford many trees for sale yet, and his acquaintance with nearly all the most eminent nurserymen in this country, and of the peculiar excellencies of their respective establishments enables him to select from them all, probably a better collection of fruit trees than any one of them can furnish. Trees ordered from any particular nursery, or to be selected by me, will be charged at nursery prices and 10 per cent commission added. Orders ought to be forwarded immediately, and all confided to the subscriber's agency shall receive his best attention.

I. I. HITCHCOCK,
Oct. 14. Amer. Farmer Establishment.

WOOL.

LYMAN REED & CO. Commission Merchants, No. 6 S. Charles street, Baltimore, Md.—devote particular attention to the sale of WOOL. All consignments made them will receive their particular attention, and liberal advances will be made when required. May 9.

FRUIT AND ORNAMENTAL TREES.

THE subscriber has now for sale, at the Bartram Botanic Garden and Nursery, near Philadelphia, a very extensive assortment of the finest ORNAMENTAL TREES, of all sorts suitable for planting in streets or avenues.

FRUIT TREES, of every good variety.
Hardy Flowering Shrubs and Evergreens.
Herbaceous Plants, Bulbous Roots, &c.
MEXICAN DAHLIAS, of 276 varieties.

ALSO,

A very large collection of the finest GREEN HOUSE PLANTS, including upwards of 1000 Camellia Japonicas of 80 varieties, 5000 Roses of 250 varieties, (chiefly new and hardy sorts,) 2000 Geraniums, of 130 varieties, with every other sort of plants usually cultivated for sale; all of which will be disposed of at moderate prices, and a liberal discount allowed to gardeners or others, who buy to sell again.

Collections of AMERICAN SEEDS or PLANTS put up for Europe, or elsewhere, in such manner as to ensure their safe transportation.

Orders per mail, or left at the store, No. 21 Philadelphia Arcade, will be promptly attended to, and plants carefully packed and forwarded agreeable to directions to any part of the United States. Address

ROBERT CARR,
nov 4. 4t. *Kingsessing.*

MORUS MULTICAULIS.

THE subscriber has on hand a few hundred of this celebrated Tree, unrivalled in the quality of its leaves as food for the silk worm, for which he is ready to receive orders (accompanied by the cash) with *particular* directions for the delivery of the trees on or after the first of Nov. next. Price 50 cents each, $5 per dozen, or $40 per hundred.

The success and ease with which this tree is propagated, the extraordinary quickness of its growth, the superiority of its leaves over *all* others for the silk culture, and its uncommon luxuriance and beauty, altogether recommend it to the favourable notice of *every farmer* as a most valuable acquisition. I. I. HITCHCOCK,
aug. 26 Amer. Far. Estab.

BULBOUS ROOTS.

HYACINTHS, Tulips and a general assortment of Bulbous Roots, suitable for the present season, for sale low at this establishment by
Oct. 28. I. I. HITCHCOCK.

WHITE TURKIES.

I HAVE now ready for sale, several pairs of these truly beautiful fowls, at $5 a pair, they are of this year's crop. I. I. HITCHCOCK,
no 18 American Farmer Establishment.

THE FARMER & GARDENER;

AND LIVE-STOCK BREEDER & MANAGER.

CONDUCTED BY I. IRVINE HITCHCOCK, AND ISSUED EVERY TUESDAY FROM THE AMERICAN FARMER ESTABLISHMENT, AT $5 PER ANNUM, IN ADVANCE.

No. 32. **BALTIMORE, DECEMBER 9, 1834.** **Vol. I**

☞This publication is the *successor* of the late **AMERICAN FARMER,** (which is discontinued,) and is published at the same office, at five dollars per year, payable in advance. ☞When this is done, 50 cents worth of any kind of seeds on hand will be delivered or sent to the order of the subscriber with his receipt.

American Farmer Establishment.

BALTIMORE: TUESDAY, DECEMBER 9, 1834.

THE KENT BUGLE.—Capt. Wm. P. Matthews, of Kent County, Md. will shortly issue a new weekly paper, under the above musical title, to be devoted in part to Agriculture and its kindred sciences. Capt. M. wields his pen with good effect, as our columns have occasionally proved, and we anticipate for him entire success in his new undertaking. May his Bugle "discourse eloquent music" to our country's friends, but "sounds terrific" to its foes, whether external or internal.

Cotton rose in Liverpool, in the second week in November, ¼ to ⅝*d.* per pound.

INTERNAL IMPROVEMENT.—The Baltimore & Ohio Rail-road, was, on the 1st inst. formally opened for travel from the Point of Rocks to Harper's Ferry, making its entire length from Baltimore 82 miles. This is, we believe, the longest continuous Rail-road yet constructed. Those who have had the management of its construction, particularly the indefatigable president, Philip E. Thomas, deserve, in our opinion, great commendation for their industry, perseverance and patience, in overcoming obstructions and difficulties, not only of a physical nature, but those also arising from prejudice and adverse interest. We hope the stockholders will be well remunerated for their investments, and we are sure the public will derive great advantage from this and other similar works.

Pedigree of the Improved Durham Short-Horned Bull BRUCE.

[Sold from the American Farmer Establishment to the Rev. J. Kirkpatrick, of Cumberland county, Va.]

Bruce, a dun and white bull, bred by Dr. David Hosack, of Hyde Park, N.Y. was got by Matchem, out of Canada.

Matchem, was got by Regent, an imported bull, out of Flora, an imported cow, a great milker and valuable breeder.

Regent, (imported) was by Regent, a son of the celebrated (old) Favorite, the sire of Comet, dam by Favorite.

Flora, (dam of Matchem) was by George, out of Phillis, and she by Petrarch.

George, was got by Phenomenon, he by Favorite, a son of old Favorite, the sire of Comet.

Canada, (dam of Bruce) was imported in May, 1824, (in the ship Canada of New York), got by Sir Peter, dam by Constellation, g. d. by Young Washington.

Sir Peter, was by Petrarch, dam Princess, by Favorite.

Constellation, was by Comet, Collings' famous bull, that was sold for 1000 guineas, out of Countess, by Favorite, that sold for 400 guineas.

Pedigree of the Improved Durham Short Horned Heifer LADY JANE.

[Sold as above.]

Lady Jane, a red and white Heifer, bred by Dr. David Hosack, of Hyde Park, N. Y. calved April 1, 1833, was got by McDuff, out of Lady Hazel.

McDuff, got by Malcom, (bred by J. Whitaker, Esq.) dam Anabella (bred by Col. Trotter) by Pyramus, g. d. Aurora by Comet, gr. g. d. Marcella, by son of Favorite, gr. gr. g. d. by son of Favorite, gr. gr. gr. g. d. by Hollon.

Malcom, bred by J. Whitecar Esqr. calved in 1823 (and imported in 1825), was got by Enchanter, dam Western Lady, by Western Comet, g. d. by Western Comet, gr. g. d. by Western Comet, gr. gr. g. d. Haughton (for whose pedigree see Herd Book.)

Lady Hazel, was sired by Favorite, (jr.) out of Young Favorite; Favorite (jr.) was by Capsall, and he by old Favorite, the sire of Comet.

Young Favorite, (dam of Lady Hazel) was bred by Samuel Scott, near Liverpool, Eng., and imported by Anthony Dey, Esq. in 1825.

Pedigree of the Improved Durham Short Horned Heifer CAROLINE.

[Sold from the American Farmer Establishment, to Dr. S. D. Martin, of Kentucky.]

Caroline, a red and white Heifer, bred by Dr. David Hosack, of Hyde Park, N. Y. calved April 7, 1833, was got by Matchem, out of Young Beauty.

Matchem, was got by Regent, an imported bull, out of Flora, an imported cow, a great milker and valuable breeder.

Regent, (imported) was by Regent, a son of the celebrated (old) Favorite, the sire of Comet, dam by Favorite.

Flora, (dam of Matchem) was by George, out of Phillis, and she by Petrarch.

George, was got by Phenomenon, he by Favorite, a son of old Favorite, the sire of Comet.

Young Beauty, was by (imported) Regent, out of Flora, the great milker, and full sister of Matchem.

REMARKABLE PRODUCTION.—The season has arrived for large squashas, large beets, large turnips, &c., and for still larger stories about them. We have our share of these wonders, and are determined not to be outdone by our cotemporaries in description. To begin then, we have three monstrous turnips, four awful great mangel wurtzels, six tremendous potatoes, and an almighty big egg plant. Of the turnips, two are of the kind called Dale's new hybrid, grown by C. Smith, Esq. of Georgetown, D.C. who is an excellent cultivator, and a competent judge of such products, and *he* thinks this new turnip a very great acquisition to our country. It suceeded much better with him than any other kind of turnip, and he thinks it equal to any other both for table and live stock. The other turnip, which is a *white flat*, (we do not mean a dandy)—and two of the mangel wurtzel roots were produced by Capt. Wm. P. Matthews, of Chestertown, Md., whose attention to, and *therefore* success in such matters, have become well known. The potatoes were sent us by A. W. Ringgold, Esq. of Rock Hall, Md. They are of the kind called blue skins, and weigh from one pound to one pound nine ounces each, a large size for that variety. We shall be happy to receive and exhibit at our Horticultural Society's room any Saturday morning, all such remarkable productions as our friends may favor us with. They attract attention, serve to stimulate farmers and gardeners, and last and *least*, they afford us matter for a paragraph.

THE FARMER.

A NEW PLAN FOR CULTIVATING THE SCUPPERNONG VINE.

To the Editor of the Farmer and Gardener.

Sir,—In offering for your valuable paper some suggestions headed as above, I may be presumptuous, as there may be found nothing, strictly speaking, *new* in my plan. But such a one only as has been virtually adopted by many others, in cultivating the Scuppernong and other native vines of very luxuriant growth.

Yet such a one as it is, taken as a *whole*, I have never seen mentioned in print. The plan is this:—to give the vines a *wide* or due distance; in planting to make *deep trenches* one way, by repeated furrows of the plow, instead of the tedious process of digging holes with the spade, and to plant *suitable trees*, not by the vine, but at due interval distances, for eventually helping to sustain the vines or the scaffolding over them. I say a *new* plan taken as a *whole*: for the parts, except the last, I have seen detailed in the columns of the "American Farmer." As to the first part, a writer from the lower part of this state, recommends thirty feet as a suitable distance for planting the Scuppernong. And as to the second, Mr. Herbemont shows the peculiar advantages of planting vines in deepened hollows, and gradually filling them up as the vines grow. He mentions, the case of a gentleman having practised this method, whose vines consequently were not affected by the vicisitudes of too wet or too dry a season, but never failed to yield well. Planting trees, too, immediately *aside* of vines, I have seen recommended, but not at *interval* distances.

Before proceeding to exhibit the particulars of my plan, I would premise an observation or two, in regard to the growth of Scuppernong vines.

The growth of this vine is not so rapid at first as that of some others. Some other kinds, such as the Halifax and Cobswine I have had to grow, when grafted to a good stock, upwards of 20 feet in a summer. This season a scion of Herbemont's Madeira, grafted, grew from the middle of May, until the middle of October, 30 feet, and there were corresponding collateral branches; and I add, bore several fine clusters of grapes.—But 12 and 14 feet is the common growth with me, of the Scuppernong when grafted; and when planted from a rooted layer, 7 and 8 feet the first season. But this kind of vine, like the growth of some trees, such as the oak, destined to be eventually *great*, although *slow* at first in making the *start*, yet after a year or two, makes gradual and *increasingly* rapid *strides* in extending its branches. If therefore, with an eye to this fact, due distances are not allowed at first, in a few years the *canopies* the vines form, will be too much crowded. In one part of my vineyard, Scuppernong vines of four years growth, planted 16 feet apart, extend branches from one to another on arbour coverings 10 feet high. Capt. Burlingham, the cultivator of the celebrated Scuppernong vineyard near Louisburg, (N. C.) advised to plant at 10 feet distance each way. I did so in a part of my vineyard, but now I am induced to remove every other vine, and plant them elsewhere, having first cut off all the upper growth, except a few inches from the root.

Indeed it appears that the before named noted cultivator of the Scuppernong, before his death (which happened recently) found himself in an error in regard to the too near distance of some of his own vines, all of which were planted more than 10 feet apart. Here pardon the digression, when I mention that the gentleman who now owns the estate of the deceased, above named, stated to me a few days since, that a half acre of the vineyard (some of the vines of which were planted about 14 years, and others at a later period) was good, one year with another, for 20 barrels of wine, and still increasing the quantity, as ascertained by the late owner. By *one year* with *another*, it is not to be understood, that the Scuppernong ever fails to bear, (for as it does not blossom till June in this climate, no frosts can injure its fruit) but that it bears more abundantly some years than others. For instance in some seasons a quarter of an acre of the above named vineyard, yielded 500 gallons of wine. The past season, the Scuppernong vines in my vineyard, were literally loaded with fruit of the finest flavour and largest growth. As a matter of curiosity I had one of the grapes measured and weighed by a neighbour. It measured 3½ inches in circumference, and weighed 2 dr. or 120 gr.

Here we inquire whether land could be more profitably occupied with any other growth than of Scuppernong vines? At a dollar a gallon, the market price for this very healthful, delicious wine, 1200 dollars are annually yielded from a *single acre* of ground, as above stated, and brought to this enormous produce, in less time than it is necessary to make an apple orchard even *begin* to be profitable by brandy making; and we might add, *begin* to contribute its stream to the river of ardent spirit, sweeping human destruction in its overflowing course. And we may safely say, that 200 dollars will cover the costs of casks, labour and sugar; leaving a clear profit of 1000 dollars per acre. Query—What should such an acre sell at, if we allow the 1000 dollars as interest for the value?

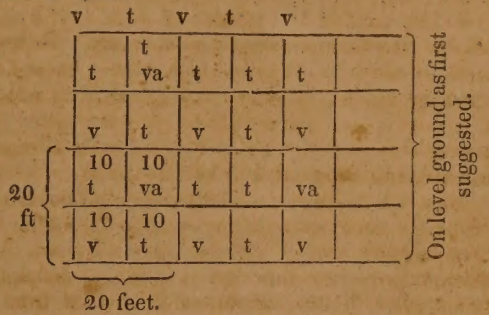
And according to Mr. Prince's statement that the Scuppernong grapes ripen as regularly as others on Long Island, (N.Y.) I would venture to assert that any where in the state of Maryland, due care in the cultivation of the Scuppernong, would eventually realize a profit like the above mentioned.

But to return from this digression (longer than intended) to my new plan. Enough has been said I presume, as to the importance of giving due distance in planting the Scuppernong; and little need be added I trust, as to the second part of my plan, viz: plowing in one direction repeatedly, until a hollow of considerable depth and breadth be made, preparatory to planting the vines. Besides Mr. Herbemont's, or the very respectable authority before quoted, the experience of others might be referred to regarding the vines producing with certainty. But there are other advantages; much labour in digging is saved. According to the common method of digging with a spade holes 2 feet wide and 2 deep, not a little tedious toil is incurred. But the plow does the business speedily, and when done effectually very little or no opening with the spade is necessary previous to planting the vines. Again, if the planting be on a hill side, (often a favourable situation for the vine) there is little danger of the soil washing away, when this plowing is done horizontally. And when the ground is not sufficiently rich, a fine opportunity of manuring effectually is presented, by spreading it all along the bottom of the hollow, and then covering it by turning a few furrows back after the vines are planted. As the roots of vines are generally co-extensive with their branches, they will as the vine grows, luxuriate all along where the manure is deposited. Or if the ground be already sufficiently strong, some of the surface soil to answer the same end, may be turned into the bottom of the plowed trench. I can say nothing as to my own experience in regard to the above, except that I planted, as just suggested, about 100 Scuppernong vines last spring, on a hill side of considerable declivity, and that their growth, (notwithstanding the severe drought here) 6 and 8 feet generally, realized my expectation. In planting I had of course, in one direction, to follow the horizontal windings. But the contrary way, or across the horizontal lines, I placed the vines in regular or straight rows. It is needless perhaps, to observe here, that the interval ground is to be cultivated in horizontal drills; (I cultivated the above in cotton.) But thinking even this plant (not to name corn or other of a higher growth) too shady for the unchecked growth of the vine, particularly when quite young, I intend to cultivate in preference, Cabbage, Mangel Wurtzel and Ruta Baga, or such plants as will not shade the ground near the vines.

I proceed to the last particular of my plan. I would premise, that I consider as a general rule, all kinds of trees are detrimental to the growth and fruit of vines when placed near them. The roots of a tree when near a vine, tend to rob it of the nutriment derived from the soil, and the fruit on the branches, shaded by the foliage of the tree, is generally more or less injured.

These observations will apply to the Scuppernong in particular. The vineyard near Louisburg, before named, has not a tree near it, but has an arbour about 8 feet high, over which to spread its luxurious branches. I make not the foregoing remarks without experience, as well as observation. The result of that experience, so far as made, is that trees in several ways may more than counterbalance the detriment they do the vine, particularly if planted according to the plan stated—that is, if fruit trees in the fruit they will yield; if timber trees, such as the locust, in their eventual profit that way; and any kind of tree in helping endurably to support an arbour for the vine, or the branches of the same by their extending limbs. By *helping* to support the arbour, I mean that each tree after attaining a proper growth, will answer as a post and fork to hold one end of the rail, or piece of timber that supports the lath or crossing poles of the arbour.—The other end of this piece of timber, (about 12 feet long in case of 10 feet distance between the tree and vine) is to be supported by a forked post inserted near the vine, after the removal of the stake, at first placed for training the vine. On this plan, any sort of trees will do little injury to vines.

I intend to plant the New Chinese Mulberry in a part of my extension of vineyard. It might be added perhaps, as one advantage of trees, that they cause a vineyard to appear more beautiful. I will here give some particulars as the ground of the foreging conclusion. Vines planted by me aside of small trees have done tolerably well, and those grafted to good native stocks even under large trees have succeeded well; vines and trees planted at the same time together, have not generally succeeded to my expectation; some sorts of trees are too rapid in their growth for the vine, but generally the vine grows too fast for the tree and stunts its growth; for instance, the New Chinese Mulberry overpowers the vine—and the vine, an apple tree. I planted some yellow locusts last spring alongside of vines a year old, and from their rapid start the present season, and the continued rapid growth of the vines at the same time, I believe they will both succeed very well. Here I observe that trees, such as the locust of narrow leaf and thin foliage, are much the best calculated for the above purpose, as the reverse of the locust, the New Chinese Mulberry, has leaves too large and thick set to grow along side of vines.—Kinds of trees, such as the oak, very exhausting as to the roots should be rejected; I have Scuppernong vines spreading over cherry trees that do tolerably well, also on peach trees. But those vines planted at a considerable distance from trees, and trained to reach and spread over them have succeeded best on trees with me, hence was suggested the last part of my plan, or that of planting trees regularly at due interval distances; the peculiar advantage of this is, that, in the most *critical period* of early growth, the tree injures not the vine, nor the vine the tree. But in all cases, trees, by cutting off the limbs when necessary, are to be prevented from attaining too great a size, particularly in *height*. Here I deem it proper to observe, that much, as to the success of my plan, depends on attentive judgment, and skill in all the details; careful execution alone attains complete sucess in any plan however well devised, mine however, I consider little else than a hint to be better matured by myself, and if deemed of any value, perhaps by others. To be better understood, I will in conclusion, recapitulate: say then, as a detailed instance of the plan as a whole, you have a piece of ground designed to be planted in Scuppernong vines—having been previously cultivated with a hoed crop, or thoroughly pulverized with the plow, proceed by plowing to make hollows 20 feet apart, and a foot and a half deep in the deepest part—then mark out the places for planting the vines, say 20 feet, a medium distance, in the rows. But if horizontal trenches, this distance will not be quite uniform between all the vines, and in this case, all the trenches of the plot must be first made, and then to make the vines stand in a straight line or in one direction, you must begin the first row directly across the horizontal hollows, or if you please obliquely, which will not leave when done a square of the space made by lines running from four corners occupied by trees and vines. In the places marked for vines, deepen the hollow half a foot, and 2 feet wide, with the spade. If your ground be pretty strong, fill up this half foot with surface earth; otherwise with well rotted manure, or a compost of rotten wood, well rotted stable manure and ashes—well rotted chip manure is excellent for the purpose; on this put a few inches of surface soil, and then plant your vine, having previously perhaps inserted your stake to support it in its first growth. Then plant a tree between each two vines in the same rows. Next prepare to plant a regular row of trees, by digging holes in the common way, or by running a few furrows equi-distant between the rows of vines, and plant the trees ten feet distant in the rows; or, if the trees are of a kind destined to be large, plant 20 feet apart, which will leave the point or corner 10 feet distance between each tree, to be occupied with a vine, to be afterward removed for the insertion of a forked post when the vines need scaffolding; or that corner may be left vacant, till such time if thought proper. But suffer me to insert here diagrams* by which I made the plan familiar to myself. I use v. for vine, t. for tree, va. for vacant.



In fine, Mr. Editor, if you deem this tedious communication worthy a place in your columns, or any part of it, and it should contribute to the more successful and extensive cultivation of the invaluable native vine of the state I inhabit, I shall consider myself abundantly rewarded for the trouble of hastily writing this, amidst a press of cares and business.

Yours, &c. with great esteem,

SIDNEY WELLER.

Brinkleyville, N. C. Nov. 26, 1834.

*We give one of the three diagrams of the manuscript, which serves for an illustration of the plan. The other two requiring curved lines to form them, the printer was unable to represent them by any materials at command. EDITOR.

PREMIUMS.—Among the premiums awarded at the September meeting of the Manchester Agricultural Society, we notice one to a "farming man servant," for having conducted himself to the satisfaction of his employer, for the term of 52 years, and one to a "farmer's dairy woman," for making the greatest quantity of cheese in one year, in proportion to the number of cows, being 101 cwt. from twenty cows.

The Society is in a very flourishing condition, its funds exceeding by one thousand pounds any former period. Its advantages to the Agricultural interests are so decided and important, as proved by long experience, that we should like to see the subject more earnestly considered in this country, and the attention of the farmers in our own State particularly, more fully awakened its importance. —*U. S. Gazette.*

PRODUCT OF WOOL.

FROM NILES' WEEKLY REGISTER.

The Philadelphia Price Current estimates the crop of wool in the United States at seventy-five millions of pounds. We think this amount is much over-rated. The committee of the New York Convention of 1831, to whom this subject was referred, estimated the crop of that year at fifty millions; and we then thought, from much personal information on the subject, that the estimate was sufficiently high—the number of sheep being put down at 20 millions. Now at 2½ lbs. each, the number must be 30 millions, to yield 75 millions of pounds of wool.

If the latter be correct, how great is the value of the property vested in the growth of wool in the United States. At the *rates* calculated by the very intelligent committee just alluded to, the aggregates would stand thus—

30,000,000 sheep at $2 each,	$60,000,000
10,000,000 acres of land to feed them, at $10,	*100,000,000
	$160,000,000
The capital then vested in the woollen manufactories was estimated at	†40,000,000
Fixed capital,	$200,000,000

The committee supposed that the whole number of persons employed in 1831, in the growth and manufacture of wool, the product of provisions and and other branches of business *directly* dependent thereon, at 162,000; and that, the value of the manufacture being 40 millions, $24,750,000 of that sum passed into the hands of the agricultural population, for materials and supplies, and labor of all sorts, and profits earned by them.

We regard this as certain, that the growth and manufacture of wool in the United States has a greater value than the growth of cotton.

*It is supposed that one acre of pretty good land is necessary for the feeding of three sheep throughout the year—and especially in the northern States, including New York, where they most abound. The present number in the State just named is, probably, nearly 6,000,000. It was 3 1-2 millions in 1825.

†And certainly has not increased since—and the persons directly employed by them at 50,000

SAND—AS A MANURE.—Good arable land is proved to contain four primitive earths, the varied proportions of which form the different qualities of the soil. It appears that the silicious principle predominates in good land. M. Chaptal found 40 per cent. of it in the most fertile soil on the banks of the Loire. For H. Davy extracted 60 from the best of the English soils; and Giobert found 79 in the most productive lands near Turin. —M. Dutrochet made the experiment of covering with silicious sand, previously unproductive land, and by this means obtained crops as good as in the most (naturally) fertile soil in the vicinity, and gives it as his opinion that its great fertilizing virtue consists in its allowing both water and air to reach and penetrate to the roots of the vegetable, of which they form the two principal elements.

THE BREEDER & MANAGER.

From the Farmer's and Grazier's Guide.

NEAT CATTLE.

Of the necessity of dressing and cleaning neat cattle.

In the stable in which horses are kept, a brush and curry-comb are indispensable requisites; but in the cow-stable, these are rarely to be found: this can only arise from an opinion that cleanliness is not so essential to the cow as to the horse. This neglect is the source of many evils. Cows cannot be healthy, unless the insensible perspiration goes on regularly; and this cannot be the case when they are put into wet land, or kept in dirty houses, and no care taken to remove the dirt or matter by which the perspirable vessels or pores of the skin, are obstructed. In dairies where the dressing of cows is regularly practised, they are uniformly stronger, and in better condition; are less subject to diseases, and yield more milk, and that milk of a very superior quality.

Cows should be dressed once a day, and on no account should any dung be left on their coats. This operation will not be found difficult when it is regularly practised, and plenty of fresh litter allowed, and their dung often removed, that they may be prevented from lying down in it. Cows thus managed, will be found much more profitable than otherwise; and the improvement will be observable both in the dung heap and in the milk.

Many persons consider that if cows have sufficient food, it is all that is necessary; but we are convinced from experience—the best of all teachers—that however well cows are fed, they will not be found near so profitable as they would be, if the care and attention so essential to their cleanliness and well-being were duly attended to; while those that are thus taken care of, will be found to thrive even upon more indifferent food.

If the udder and teats of the cow are occasionally washed with warm water, those hard swellings, which are often very troublesome, will be prevented, as will also warts and other excrescences to which the udder is subject without this attention. The udder, and especially the teats, should be washed, immediately before the cow is milked.

Of foddering, or feeding.

In the various publications which have appeared relative to the management of neat cattle generally, but of milch cows in particular, there seems to be too much stress laid on the quality of food that should be given them, to the exclusion of a much more important consideration; namely, the health of the organ that is to digest and assimilate the food. This has been a very common error, and has led to the opinion, that the lactiferous powers of the cow may by increased to a great extent, merely by supplying the animal with that extra natural nutriment which is so abundantly found in the artificial grasses, and the various roots that are now getting into use. This is, however, a great mistake; the power of the organ is limited, and if we give the animal such food as exceeds either in quantity or quality the power of the organ which is to assimilate it, we are sure to defeat the object we endeavour to obtain.

It has also been considered, and some experiments have been published to support the opinion, that by a judicious use of the artificial grasses in summer, and of the saccharine and mucilaginous roots in winter, the produce of milk may not only be increased, but even extended to a much greater length of time. A little reflection will, however, convince us, that in this, as well as in many other farming concerns, people want to take more out of a thing than its nature is capable of yielding: they want to kill the goose that has the property of laying the golden eggs, in order to get them before the proper time. But in this, as in every other thing of the same kind, such persons are blind to their own true interest.

The proper management of neat cattle, as well as of milch cows, is a very plain and simple thing. If we have a sufficient extent of old pastures for them, very little reflection upon the subject is necessary; but if we are compelled to have recourse to what are termed, artificial means, then it is that our skill and judgment are brought into trial.

Perhaps, by a judicious use of mangel-wurtzel, and other nutritious roots, we may promote and extend the lactiferous services of the cow in a considerable degree; yet we must never lose sight of the important truth, that the stomach, as well as the udder, are of limited power, and that the former must not be oppressed with an improper quantity of food, nor the latter with too much blood, however wholesome and nutritive the food may be.

It is one of the consequences of improper feeding, that it is the cause of difficult labour in the cow, and the occasion of the frequent necessity for the assistance of the cow-doctor in the delivery of the calf. Mr. J. White, in his Compendium of Cattle Medicine, describes the appearance which presented itself on opening a cow that had died from over-feeding. When she was near calving, she was kept in the field, and liberally supplied with hay (in winter): one morning, she was found dead, and her death was attributed to her having fallen into a sort of hollow, which was so inconsiderable that, had her stomach been free from the load that was found in it, she could undoubtedly have got up again." "I found," says Mr. White, "the rumen, or paunch, weighing nearly one hundred pounds, and the poor calf seemed to have been driven into a corner, and suffocated. I am decidedly of opinion," adds Mr. W. "that the cause of the peculiar difficulty in parturition, or rather the frequency of it, in the cow, is owing to improper feeding."

If we observe the intimate connexion which exists between the fourth stomach and the udder of the cow, we shall soon perceive the fact, that when the former becomes inflamed or disordered, the latter is sure to sympathise with it; and also that if the udder becomes materially injured, the stomach inevitably participates. This is another circumstance which should induce us to be very careful in feeding milch cows whenever we are under the necessity of taking them from their natural pastures.

When mangel-wurtzel was first introduced, it was given profusely and indiscriminately; and considerable injury was done in consequence. In the Farmers' Journal, (in 1814) it was stated, that all Mr. Coke's cows were fed upon mangel-wurtzel, and that only, for a few days, strewed upon grass land, in the same manner that turnips are given in some counties; and that they were affected with the palsy, and some of them lost their milk; but that as soon as the mangel-wurtzel was discontinued, they began to recover. In the same Journal it is also stated, that when mangel-wurtzel was given by a practical farmer to his cattle in large quantities, and without hay, it in many instances caused a partial paralysis of the hind parts, the animals appearing as if they had been injured in the back. And yet it is added, that Lord Crewe gave nearly sixty pounds per day to milking cows with a proper proportion of hay, not only with impunity, but with the best effects.

In another number of the Farmers' Journal, it is stated, that in the spring of the year, Mr. Birch gave each cow a bushel of mangel-wurtzel daily. A sweet flavour was soon distinguishable in the milk, the quantity increased, and the butter partook of the sweet flavour of the milk. The cows were very healthy, and remained so throughout the summer. The second year's crop was given in part to the cows as soon as taken from the ground, and the same improvement was soon observed in the milk and the butter, as well as an improved condition of the cows. Mr. Birch wished to save a pasture for mowing that season, and reserved the other part of the roots till the spring; and in the month of May he found them as sound as when first gathered, and they remained so until the cows had finished them. The latter end of June, he gained his crop of hay, and delightful May butter, and his cows had all the appearance of the highest state of health.

The results of the following experiments will we think, be worth the farmer's attention.

On the morning of the 18th of October, two milch-cows, that had calved in the spring, were turned into an over-eaten pasture, and fed every morning and evening with hay only, and the products being measured at each meal, the result for one week was—one hundred quarts of milk, eleven pints of cream, and four pounds and a half of butter. The cows remained in the same pasture another week, and were fed with mangel-wurtzel and hay, each cow having half-a-bushel, sliced, and given to her morning and evening; the week's result was then found to be—one hundred and thirty quarts of milk, seventeen pints of cream, and six pounds and three quarters of butter. The next week the cows were fed upon hay only, and the result was only eighty-seven quarts of milk, eight pints and a half of cream, and three pounds and a half of butter.

In Ireland, the quantity given to each cow varies from twenty-five to one hundred and twelve pounds daily; and this is given not only without any bad results, but with considerable advantages, both as to the dairy and in feeding for the butcher: it is, however, accompanied by a moderate quantity of hay, and sometimes by an intermediate feed of turnips.

Mr. Pomeroy, an eminent farmer, ordered three wheelbarrowsful of this root, fresh pulled from the ground, to be thrown to his milch cows on a pasture. The food was so delicious, that they contended for exclusive possession; and the strongest

having succeeded, she continued to devour the roots with avidity, till they were all consumed, and herself gorged beyond the possibility of recovery. But in this case, instead of paralysis, the same symptoms took place as are caused by unrestrained feeding upon fresh clover. The rest of the cows were subsequently fed upon the same diet, but given in moderation, with a proportion of hay, and they continued in perfect health.

From all the observations it would appear that mangel-wurtzel is a valuable, nutritious root, well adapted to the feeding of cattle, and one from which no injury need be apprehended when proper care is taken in feeding the stock with a moderate quantity daily; like clover, turnips, and aftermath, it abounds in rich, nutritious matter, and when used for food must, like them, be accompanied with a proportion of hay.

It has been suggested, and very properly, that during the heat of summer, cows should be sheltered by suitable sheds, where they may be advantageously fed with tares, cabbages, turnips, potatoes, mangel-wurtzel, &c.; and it is most probable, that by indulging the animal in a little variety with regard to food, its health would be improved, and the formation of milk materially increased.

It is certainly of importance and most profitable to feed cows liberally, giving it them often and in small quantities, especially such as have been recently taken into the dairy; and it is no less so that their food should be of the best quality. It is an established fact, that a small quantity of food, well chosen, and of prime quality, is infinitely better than an abundance of such as is bad, or even only indifferent.

The fodder of cows is of two kinds: dry, and green;—the former is given in the stable; the latter usually in the fields. In the former case, *a small quantity only should be given at a time*, but that the more frequently. Cows are by this means prevented from gorging themselves; and the consequences resulting from indigestion are avoided; they are also prevented from weakening their appetite, or from having a distaste for their food from too much being put at one time before them, and blowing upon it. In eating only a small quantity at a time, they ruminate much better and with more ease, whereby digestion is greatly facilitated; and not only the health and condition of the animal kept up, but an abundance of rich milk also—the certain consequence attendant upon good feeding and perfect digestion.

We have given directions as to the proper use of mangel-wurtzel, and due cautious of the necessity of mixing it with hay; we shall also, as we proceed, have occasion to shew the superiority of steamed or cooked food, particularly potatoes, over that given raw, and in what manner turnips, cabbages, &c. may be given with most advantage; but there are times when all these may run short, or cannot be conveniently procured; it is also best occasionally to diversify the green food of cows, or neat cattle generally. On these several accounts, we shall state what plants may be given green, not only with safety, but in many cases with advantage.

The plants mostly in use for this purpose are—lucerne, trefoil, sainfoin, colewort, wild chicory, burnet;—the leaves and roots of carrots, radish, rape, cabbage, pumpkin, (or pompion;)—the leaves or tender twigs of maize, (or Indian corn,) lettuce;—the leaves, stems, and tubercles of potatoes, and topinambour;—as well as the following generally:—prickly broom, parsley, orach, bistort, vetches, lentils, pea, and bean-shells, in short, almost all leguminous* plants, and the greater part of garden plants, as well as those which grow in the fields after harvest.

Young thistles produce a rich, creamy milk. The leaves and tender twigs of many kinds of trees, such as the acacia, elm, ash, maple, oak, melon, poplar, and the leaves and tendrils of the vine are aliments that may be occasionally employed with advantage, but only in very small quantities.

On the borders of the sea, in times of drought and scarcity, cows or neat cattle may be fed with the different species of *Algæ* and *Fuci*, and *Cristis marinies*, after the plants have been bruised and boiled in fresh water. Buck-wheat and nettles do well in the poorest land. Cows readily eat the latter, either when mixed with straw, or steeped in hot-water for a night, and given in the morning altogether, the liquor being much relished by cows;—they also produce a large quantity of milk.

When roots are given to cows, it is necessary to cut them in slices, as otherwise there is danger of their choking them; an accident that often happens. There are some mills made for this purpose, which are simple, convenient, and not expensive. It is a fact sanctioned by experience, and warranted by experiment, that roots, when cooked or boiled, are far more nourishing, and give more milk than when raw.

In several parts of England, France, Holland, Germany, Piedmont, and part of Italy, they give cooked food (by steam,) and find great advantage in it. Great caution is necessary in giving the young shoots of oak, ash, elm, or other trees; either of these, when eaten too freely, are apt to bring on red water, dysentery, and other serious and even mortal diseases.

Cows should never eat green fodder that has been lying in a heap till it is become hot; not only because it is difficult of digestion, but likewise from its being liable to bring on inflammatory and putrid disorders.

Cut straw and chaff may be added occasionally, but on no account should the husk of grain be ever given, it being perfectly indigestible, and consequently dangerous. Mr. Curwin, a respectable farming gentleman, says that he fed forty milch cows, and forty oxen, occasionally, with cut straw well steamed; and remarks, as a proof of its successful adoption, that they continned in very high condition; which he attributed to their warm food. He says, "The quantity of food used is but trifling; and very few of my milch cows that are not fit for the butcher, at the same time that the average of milk was between twelve and thirteen quarts upon three hundred and twenty days.

In 1798, the Bishop of Killalo, during a season of peculiar scarcity, fed his cattle upon his Lincolnshire estate, upon steamed potatoes; and notwithstanding the cattle for many miles round were generally in a deplorable state, his were in the highest condition possible, solely from the effects of the food given them. But some accident happening to the steaming apparatus, his lordship was reduced to the necessity of feeding them principally upon raw potatoes; the consequence was, they immediately fell away to a state that is hardly credible. This is a most important fact; and shews the superior advantages of cooked food, even of the same kind, over that in the raw state.

Green fodder should not be brought in or out until the sun has dissipated the dew. It would be very dangerous to give it when covered with dew, as in that state it is difficult of digestion, and very apt to ferment in the first stomach, or rumen, and blow the animal, or blast it, as it is commonly called—a disease that often proves fatal, if not very shortly relieved.

* Leguminous plants are those whose seed or fruit are enclosed in a pod, as the pea, and bean, &c.

Cure for hoven Animals.—When animals have eaten too great a quantity of fresh plants, they become swelled, and often die in a few hours for want of proper treatment of the disease. In some countries they make a puncture into the abdomen and intestines, and thus let off the gas which distends the stomach and bowels: but this operation is attended with inconvenience and danger. As the distention is caused by the carbonic acid gas which is produced by the fermentation of herbage in the stomach, nothing is more efficacious than to make the animal swallow a substance with which the gas will combine. A spoonful of ammoniac mixed with a glass of water and given to the animal will absorb the gas in the stomach, and effect a speedy cure. Mr.Thenard has made use of ammoniac for 14 hoven cows, and this method has perfectly succeeded with 12 of them; the other two perished because the ammoniac was employed too late. Another person has used ammoniac with 2 cows, and both were immediately cured. [Perhaps other alkalies will be as effectual as ammoniac. The New England Farmer (No. 25, Vol 1) recommends a dose of lye, made with potash, pearlash, or house ashes.]

Horses and Oxen.—M. Dupetitmont, in a late agricultural work, examines the advantages of cultivating land by the labor of horses, and by that of oxen. He concludes that the food of horses costs twice as much as that of the oxen required to perform the same work; that horses have 261 kinds of diseases, and oxen only 47; and that the manure produced by a horse will enrich only half as much land as that furnished by an ox.

Domestic Animals.—*A great discovery.*—It is stated in a late foreign paper that Mr. Renucci, a medical student at Paris, has succeeded in detecting the itch insect, which is sometimes so annoying to filthy persons. It resembles the mole in shape—and has a long proboscis, by which means it succeeds in burrowing beneath the curicle. Whether it has eyes or not, is not stated. The discovery has produced quite an excitement among the *Savans* at Paris.

Melancholy.—The Pittsburgh (Pa.) Saturday Visiter says that there are now in that city more than *five hundred adults who can neither read nor write!*

THE GARDENER.

[From the Young Gardener's Assistant.]

ON TRAINING AND PRUNING FRUIT TREES AND VINES.

In training and pruning fruit trees, particular attention is required. To supply a tree with a sufficiency of vegetable juices, there must necessarily be living bark and wood, in an uninterrupted succession from the root to the extremities of the branches; pruning therefore is useful to remedy any defect, as well as to take off superfluous wood and prevent unnecessary waste of the sap. Pruning may be performed at different seasons of the year according to the kinds of fruit, which will be shewn under each head, as we proceed.

In the spring, or summer pruning, be careful not to destroy the germs of future fruits; but merely remove all unserviceable sprays. In the winter season, make your selection from the wood shoots of the preceding year; keep those which appear the most healthy, and cut away those which seem redundant. Beginners had better prefer the spring, as the buds will then be a guide for them to go by; but this business must not be delayed too late in the season, as some kinds of trees and vines are apt to bleed from being pruned untimely.—When the sap rises in Grape Vines, &c. before the wound is healed, bleeding ensues, and is not easily stopped. When this happens, sear the place, and cover it with melted wax, or with warm pitch spread upon a piece of bladder; or peel off the outside bark to some distance from the place; and then press into the pores of the wood a composition of pounded chalk and tar, mixed to the consistence of putty. Vines will bleed in autumn as well as in spring, though not so copiously at the former season. The best preventive is timeous or early pruning in the spring; and not pruning until the wood is thoroughly ripe in autumn. With respect to the manner in which vines, and some particular kinds of trees should be trained, opinions are at variance. Some advise training the shoots in a straight and direct manner, others in a horizontal manner, and others in a serpentine form, &c. If vines be trained on low walls or trellises, the horizontal or zigzag manner of training may be adopted. Horizontal training is that in which from a main stem, lateral branches are led out horizontally on each side.

It has been remarked that in order to be a good trainer of vines, a man must have some forethought, and be capable of making his selection, as the plants shoot. He must predetermine how he shall prune, and where he shall cut at the end of the season; and so as it were, fashion the plants to his mind. He has this more effectually in his power, with respect to the vine, than any other fruit tree, on account of its rapid growth and docility.

By attending to the proper pruning of fruit trees in the winter, every advantage is promoted, and by a judicious management in other respects, wood may not only be obtained but preserved in every part of the tree, and so that it will bear down to the very bole, which will evidently be greatly to the credit of the gardener, the benefit of the proprietor, and will be equally conducive to the beauty and welfare of the tree. While trees are young, it is necessary to lay a good foundation for a supply of bearing wood in future years, for when this is neglected, and they become naked, it is some time before a supply can be recovered. In shortening a branch, always take care to cut in a direction a little sloping, and so that the slope may be parallel in a contrary way to the nearest bud left. It is requisite to have a very sharp knife, that the cut may not be ragged, but clean, and in the operation, must be careful that the knife does not slip, so that any other branch be cut or damaged. The general pruning of fruit trees is indifferently performed by many persons at any time from autumn to spring, and it may be done so without any great injury to them providing that mild weather is chosen for the purpose, and the wood is well ripened. Although it may be advantageous to prune trees early in the winter when the wood is well ripened, yet when the wood is green and the buds are not arrived at a mature state, it is requisite in such instances to defer pruning until spring, taking care however that it is performed before the moving of the sap. The necessity of this arises from the circumstance that as the wood is not ripened in autumn, the sap is then in an active state, and will continue so until the frost, &c. causes it to become stagnant, and if the shoots were shortened whilst the sap was in motion, the buds would be considerably injured and the tree weakened. Such unripe shoots are also more liable to suffer by the severity of winter, and when the pruning is deferred until spring, all such parts as may have been affected by the weather, can be removed to the extent to which the damage has been sustained.—As the pruning of such unripe wood in the autumn would be injurious, so it frequently is when it is done during winter, and the more so, according to the severity of it. Because, whenever a cut is made on such green wood, the frost generally affects it, as the sap is not dense, nor the wood so firm, as to be able to resist its intenseness. Whatever method is adopted in training trees, care should be taken to keep the two sides as nearly equal as possible; this may easily be done whether they are trained in the fan, or horizontal method.

For espalier trees the horizontal method has many advantages over any other; the small compass in which the trees are obliged to be kept requires such a direction for the branches, in order to make them fructiferous. And were very high trellises formed, so as to admit of the trees being trained in the fan method, such would be very objectionable by reason of the shade they would cause, and the trees would also be deprived of the benefit of a warmer temperature, which those less elevated receive, by the effects of which fruitfulness is considerably promoted.

As some young gardeners may not know what is meant by *espaliers*, it may be necessary to explain, that, espaliers are hedges of fruit trees, which are trained up regularly to a frame or trellis of wood work; they produce large fruit plentifully, without taking up much room, and may be planted in the kitchen garden without much inconvenience to its other products. For espalier fruit trees in the open ground a trellis is absolutely necessary, and may either be formed of common stakes or poles, or of regular joinery work, according to taste or fancy.

The following article is selected as appropriate to our subject, from the fourth volume of the New York Farmer and Horticultural Repository, No. 1, page 3, communicated by that enterprising Horticulturist, J. Buel, Esq., of the Albany Nursery, and entitled Hints on Pruning:

The principal objects of pruning, are to procure a good bole or trunk for timber; to form a proper head for the production of fruit; and to subserve the purposes of ornament.

To effect these objects with the least trouble and greatest advantage, upon all non-resinous trees, the following rules are recommended:

1st. Begin to prune the tree when it is young.

2d. Cut close and smooth to the bole or limb.

3d. Cut, when small, the branches which are likely to interfere, or become useless, and which, if suffered to remain, will require to be removed at a more advanced period of growth.

4th. Do not trim to excess. Let the branches occupy *at least* a third of the entire height of a tree.

5th. Do not prune when the tree bleeds.

Where the preceding suggestions are observed, we may add—

6th. Prune in summer.

I proceed to offer my reasons for the rules here recommended—and,

First. The food required to nourish the lateral useless branches, will go to increase the diameter and height of the plant, or swell the fruit, if these are judiciously removed. But a main consideration is, that the excision of small branches causes only small wounds, and small wounds speedily heal. The observance of this rule, therefore, facilitates growth, promotes health, and ultimately saves labour.

Secondly. This rule needs very little argument to enforce its propriety, as every observer must have frequently seen and lamented the ruinous effects of an opposite practice. The snags either send out useless sprays, or deprived of the feeble aid of these, they die and rot, and carry disease into the bole, and are thus often the cause of the premature loss of the entire tree. If cut close, the enlargement of the living wood soon covers the wound. In large branches, where the saw must be used, the healing process is greatly facilitated, by paring the cut, particularly the exterior edges, with the pruning-knife; and it is a good precaution, before you use the saw, to notch under the intended cut, to prevent tearing the bark when the limb falls. In extirpating sprouts from the roots, and neither they nor those growing from the bole should be suffered long to remain, the like precaution of cutting close should be observed; for which purpose, it is necessary first to remove the earth from about the collar, with the spade or other instrument.

Thirdly. The reasons for pruning a tree while young, apply here: it is easier to cut small than large limbs, and the wounds of the former soonest heal. But the question presents, what limbs are to be cut? Generally all that are likely to cross each other, all feeble sprays, the strongest on the bole, and the weakest in the lop; for while the trees are in the nursery, I think it ser-

viceable to leave a few scattering laterals upon the bole, and it is beneficial, at all ages, to thin most kinds in the lop. Yet the answer to the inquiry will depend principally upon the species of tree, and the design of the planter. If his object be timber, the leading shoot should be feathered up in a spiral form, and all other shoots likely to interfere with its growth, be cut away. If the object be fruit, beauty and utility are to be consulted, and these are seldom incompatible in the eyes of a fruit-grower, for with him productiveness constitutes beauty. If ornament be the main consideration, no special directions can be given, as the species employed, the location, and the taste and fancy of the planter, will have a controlling influence. The rule for timber trees will not apply to either those destined for fruit or ornament.

In orchard and garden fruit, generally, the endeavour should be to obtain a low and spreading top. When a clean bole is obtained to a sufficient height, say in the orchard of seven or eight feet, and in the garden according to fancy, the leading shoot should be cut in, and three or more arms or branches left to form the head; which, when the habit of the tree will permit it, should be pruned so as to give it a besom form, or that of a broom divested of its centre. Several advantages arise from this and a more expanded form. It admits the air and sun more freely, to mature the fruit and wood; it renders the tree less liable to be blown down; it facilitates the gathering of the fruit, and the pruning of the tree. But the principal advantage consists in its tendency to increase oviparous or fruit buds, and consequently to augment the fruit. A great growth of wood seems to be incompatible with a great crop of fruit, and vice versa. A cow which gives much milk seldom takes on much flesh during the milking season. If the secreted food is converted into milk and fruit, there can be but little reasonable hope of its adding to the flesh of the animal, or the wood of the vegetable. Erect branches produce most wood buds, horizontal branches the most fruit buds. Straight limbs produce less fruit than those that are curved or crooked. Whatever retards or diminishes the flow of elaborated sap, in a healthy tree, is favorable to the production of fruit. Hence wall trees, whose limbs are trained in the form of a fan, or in a horizontal direction, fruit better than those that grow upright as standards. Hence young trees are more apt to show blossoms the first and second year after transplanting, than in the two subsequent years. Pomologists have endeavoured to render this law of vegetation subservient to their interests, by adopting artificial means for inducing the production of fruit buds. These means consist in ring-barking, transplanting, cutting the roots, training, pruning, &c. The pears in the Caledonian Horticultural Gardens are trained *en quenouille*, that is, the lateral branches are cut in to a short distance of the main stem, and kept so, and the fruit is produced on the spurs growing from these shortened branches. In the Horticultural Garden of London, the limbs of the Pear are tied down in a drooping position, resembling somewhat in appearance the weeping willow. The vines cultivated at Thomery, celebrated for their superior fruit, are planted eighteen inches apart, trained in the form of a T, the top horizontally, and restricted in their growth to four feet from the main stem. In this way a trellice of eight feet long, and eight feet high, is sufficient for five vines, which produce upon an average 320 bunches of fruit.—These modes of training have a common object, that of restricting the growth of wood, and producing an increase of fruit. Those who wish to examine the modes of training here spoken of, in detail, are referred to Loudon's Gardener's Magazine.

Fourthly. Leaves are as necessary in the economy of vegetation as roots. The sap must be elaborated in these before it can be transmuted into wood, bark, or fruit. A tree cannot thrive, therefore, when these organs are either deficient or diseased. If sufficient leaves, or branches to produce them, are not left to concoct, or digest the sap which is propelled from the roots, the tree, to use a modern term, but a just comparison, becomes *dyspeptic*, the vegetable blood is vitiated, the wood loses its texture, and a stinted growth, or premature death generally ensues. Hence great precaution should be used against excessive pruning.

Fifthly. To prune when the tree bleeds, tends to debilitate, by wasting what is designed as food for the tree. I have known it fatal to the vine. What is termed bleeding, is the flowing of the sap from wounds before it has been converted into aliment. This sap flows most freely while the buds are swelling, and until the leaves are fully capable of discharging their office, as is strongly instanced in the maple, birch, &c. Our orchards are generally pruned in March, which is probably the most unfavorable month in the year for this operation.

Sixthly. The advantages of summer pruning are, that the tree being then in vigorous growth, the wounds heal speedily; and the sap being concocted and thick, does not flow from the wounds, and thereby impair the health of the plant. Summer pruning should not be performed, however, before July, when the new growth has considerably advanced. It may be well to add, as this suggestion may seem unsound, that summer pruning is recommended by the best authorities. "As a general rule," says Pontey, "summer is preferable to winter pruning;" and Sang suspends pruning "from the beginning of February to the middle of July, but carries it on during every other month of the year."*

In regard to evergreens, which with us are confined principally to resinous trees, it is the general practice of nursery-men, and I think it a judicious one, not to prune them till they have acquired some years' growth, and then but sparingly and at long intervals, displacing two or three tiers of the lower branches every two or three years. Monteith says, "never cut off a branch till it has begun to rot, as the bleeding of a live branch will go far to kill the tree."

The implements employed in pruning, and the manner of using them, are matters of moment. If the operation is commenced when the tree is young, and judiciously followed up, a good knife, a small saw, and a chisel fixed on a six foot handle, to trim the tops and extremities of the branches, are all the tools that are required. A large saw will be occasionally wanted; but an axe or hatchet should never be employed, as they fracture the wood, bruise and tear the bark, and disfigure the tree.

* The Gardener's Magazine for October, has a communication from John Bowers, recommending summer as having a decided preference. The growth of trees thus pruned, he says, far exceeds that of the winter pruned. He commenced the practice in 1826, when his trees were six feet high; and in the autumn of 1829, they were 20 feet. He has this year summer-pruned 100 acres of young plantations, which in August were stated to be remarkably thriving and healthy.

MISCELLANEOUS.

Popular Science.—The conviction of the great importance of geological surveys is spreading over the United States. Governor Vroom, of New Jersey, in his late message to the Legislature, recommended a scientific investigation of the mineral resources of that State. An impression of the importance of such an investigation is prevalent in our neighbor, Delaware. A correspondent of the National Gazette complains of the want of scientific research into the immense mineral deposits in Pennsylvania, and consequent loss to the inhabitants of the State. 'The coal fields on the Schuylkill,' he says, 'were ushered into notice by chance. If sheer chance has worked this result, what might we expect from science?' The Geological Society of Pennsylvania is, however, now moving in the subject. Mr. Featherstonhaugh has been commissioned by the General Government to make a geological examination of the territory of Arkansas, and make a report to Congress at the approaching session. Our own State has the credit of being among the earliest to perceive the vast importance of a geological survey and to provide for it. We understand that the state geologist has already collected at Annapolis and classified according to counties a large number of specimens. When this state cabinet shall be completed, it will be an invaluable index to the mineral resources of the state.

Balt. American.

A Grain of Corn.—One grain of corn, dropped by accident on the land of Major Jacob Clark, of Durham, Mass. yielded this year, nine ears, with sixteen rows each, averaging 40 kernels to each row, and making the whole produce of the single grain about five thousand.

Popular applause.—Though ten thousand tongues should chant our praises, they would sound unharmonious in our ears, if conscience join not in the choir!

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BALTIMORE PRODUCE MARKET.

☞ *These Prices are carefully corrected every* MONDAY.

	PER.	FROM	TO
BEANS, white field,	bushel.	—	3 00
CATTLE, on the hoof,	100lbs.	5 00	5 50
Slaughtered,	"	3 00	4 00
CORN, yellow,	bushel.	50	52
White,	"	50	52
COTTON, Virginia,	pound.	13	15
North Carolina,	"	14	16
Upland,	"	14	16
FEATHERS,	pound.	36	—
FLAXSEED,	bushel.	1 62	1 65
FLOUR—Best white wheat family,	barrel.	6 00	6 50
Do. do. baker's	"	5 50	6 00
Do. do. Superfine,	"	4 75	5 00
Super Howard street,	"	4 75	4 87
" " wagon price,	"	4 75	—
City Mills, extra,	"	5 12	5 25
Do.	"	4 87	5 00
Susquehanna,	"	5 25	—
Rye,	"	—	—
GRASS SEEDS, red Clover,	bushel.	5 00	6 00
Timothy (herds of the north)	"	3 00	3 50
Orchard,	"	3 00	3 50
Tall meadow Oat,	"	2 00	2 50
Herds, or red top,	"	1 25	—
HAY, in bulk,	ton.	15 00	—
HEMP, country, dew rotted,	pound.	6	7
" water rotted,	"	7	8
HOGS, on the hoof,	100lb.	4 87	5 00
Slaughtered,	"	5 00	5 50
HOPS—first sort,	pound.	15	—
second,	"	13	—
refuse,	"el.	11	—
LIME,	bush	30	33
MUSTARD SEED, Domestic,	"	5 00	6 00
OATS,	"	30	32
PEAS, red eye,	bushel.	60	—
Black eye,	"	87	1 00
Lady,	"	100	—
PLASTER PARIS, in the stone,	ton.	3 12	—
Ground,	barrel.	1 37	—
PALMA CHRISTA BEAN,	bushel.	1 50	1 56
RAGS,	pound.	3	4
RYE,	bushel.	64	66
TOBACCO, crop, common,	100 lbs	4 50	5 00
" brown and red,	"	5 00	7 00
" fine red,	"	7 00	9 00
" wrappery, suitable for segars,	"	6 00	12 00
" yellow and red,	"	8 00	12 00
" yellow,	"	13 00	17 00
" fine yellow,	"	15 00	25 00
Seconds, as in quality,	"	3 50	5 00
" ground leaf,	"	5 00	9 00
Virginia,	"	4 00	—
Rappahannock,	"	—	—
Kentucky,	"	4 00	9 00
WHEAT, white,	bushel.	1 03	1 09
Red,	"	95	1 00
WHISKEY, 1st pf. in bbls.	gallon.	32	33
" in hhds.	"	29¼	—
" wagon price,	"	27	28
WAGON FREIGHTS, to Pittsburgh,	100 lbs	—	1 37
To Wheeling,	"	—	1 50
		washed.	*unwash*
WOOL, Prime & Saxon Fleeces,	pound.	50 *to* 60	24 *to* 26
Full Merino,	"	44 50	22 24
Three fourths Merino,	"	37 44	22 24
One half do.	"	33 37	22 24
Common & one fourth Meri.	"	30 33	20 22
Pulled,	"	31 33	22 24

BALTIMORE PROVISION MARKET.

	PER.	FROM.	TO.
APPLES,	barrel.	$2 50	$4 00
BACON, hams, new,	pound.	11	—
Shoulders,	"	8	9
Middlings,	"	—	—
BUTTER, printed, in lbs. & half lbs.	"	25	37
Roll,	"	15	25
CIDER,	barrel.	3 00	4 00
CALVES, three to six weeks old	each.	4 00	7 00
COWS, new milch,	"	22 00	30 00
Dry,	"	9 00	12 00
CORN MEAL, for family use,	100lbs.	1 56	1 62
CHOP RYE,	"	1 56	1 62
EGGS,	dozen.	19	20
FISH, Shad, salted,	barrel.	5 75	6 00
Herrings, salted, No. 1,	"	4 75	—
Mackerel, No. 1, 2 & 3,	"	4 87	6 75
Cod, salted,	cwt.	2 50	3 00
LAMBS, alive,	each.	1 25	2 00
Slaughtered,	quart'r	31	50
LARD,	pound.	8	9
ONIONS,	bushel.	62	75
POULTRY, Fowls,	dozen.	—	2 50
Chickens,	"	1 75	2 00
Ducks,	"	—	2 50
POTATOES, Irish,	bushel.	40	62
Sweet,	"	62	75
TURNIP,	"	37	50
VEAL, fore quarters,	pound.	3½	4
Hind do.	"	6½	—

ADVERTISEMENTS

TO NURSERY MEN.

1630 Peach Stocks—One year old.
45 do. do.—two years old.
520 Fear do. two do. do.
740 Apple do. two do. do.
For sale cheap. Enquire at this Establishment.
Dec 9.

GRAPE VINES.

HERBEMONT'S Madeira, one, two, and three years old, from 25 cents to 75 each.
Isabella, two and three years old, at 25 to 50 cts each.
Catawba, one year old, 25 cts. each.
White Scuppernong, two years old, at 37½ cents each.
Sultana, one year old, at 50 cts. each.
Woodson, two years old, at 37½ cents each.
Red Bland, one year old, at 25 cts. each.
Are for sale at this establishment, and will be well packed to go any distance. no. 25

GAMA GRASS SEED

JUST received, and for sale at this Establishment—Price 50 cents per ounce.

PEA FOWLS.

ONE pair 2 years old, and one pair 3 years old, for sale at this establishment. Price $3 a pair. no 4

MORUS MULTICAULIS.

THE subscriber has on hand a few hundred of this celebrated Tree, unrivalled in the quality of its leaves as food for the silk worm, for which he is ready to receive orders (accompanied by the cash) with *particular* directions for the delivery of the trees on or after the first of Nov. next. Price 50 cents each, $5 per dozen, or $40 per hundred.

The success and ease with which this tree is propagated, the extraordinary quickness of its growth, the superiority of its leaves over *all* others for the silk culture, and its uncommon luxuriance and beauty, altogether recommend it to the favourable notice of *every farmer* as a most valuable acquisition. I. I. HITCHCOCK,
aug. 26 Amer. Far. Estab.

BULBOUS ROOTS.

HYACINTHS, Tulips and a general assortment o Bulbous Roots, suitable for the present season, for sale low at this establishment by
Oct. 28. I. I. HITCHCOCK.

BAKEWELL RAMS.

TWO Bakewell Rams of good size and quality, for sale by a farmer near Baltimore at $20 each. Apply to I. I. HITCHCOCK,

FRUIT TREES—CHEAP.

An Invoice of fruit trees from a first rate nursery, having been missent, is offered by the owner for sale at a reduced amount. The opportunity is a favorable one for procurring a lot of first rate trees, at a great bargain. The following is a list of the trees which are laid in the ground by the heels so as to continue unhurt till next spring if necessary.

APPLES.

2 Monstrous Pippin.
2 Flushing or Esopus Spitzenburgh.
2 Royal Pearmain.
2 Long Island Russet.
2 Winter Pearmain.
2 Alexander—a new Russian apple, very large and of great celebrity.
2 Rhode Island Greening.
2 Pomme d'appi, or Lady apple.
2 Carthouse.
2 Newtown Spitzenburgh.
2 Bellflower.
2 Vandevere.
2 Red sweet Vandevere.
2 Michael Henry Pippin.
1 Winesap.
1 Rambo or Romanite.
1 Large Yellow Newtown Pippin.
6 York Greening.
7 Red Streak.

PEACHES.

1 Teton de Venus.
4 Malcaton.
1 Lehman's cling.
2 Gough's Cling.
3 Oblong open Peach.
1 Fine Cling.
2 Early Etna.
4 Budded trees that have lost their labels.

PEARS.

2 Jagonelle.
1 Portugal.
1 Summer bergamot.
1 Ambert.
1 Butter.
1 Seckel.
2 St. Germaine.

PLUMS.

1 Peters' large Yellow Gage.
1 French do. do.
1 Gage.
1 Egg.
1 Imperial.
1 Bolmar's Washington.
1 Blue Damascene.

CHERRIES.

2 Morrello
1 Orleans.
2 May Duke.

QUINCES.

1 Portugal.
1 Orange.

The Invoice including packing mats, &c amounts to $30, and the whole will be sold for $20, which may be sent to I. I. HITCHCOCK.
Amer. Farm. Estab.

AGENCY FOR TREES, &c.

THE subscriber respectfully offers his services to his customers and the public generally, as agent for the procurement of Fruit and other Trees. It may not be generally understood or duly considered, that few nurseries contain *all* kinds of trees in equal perfection. One, for instance, is celebrated for its fine apple trees, another for its peaches, and a third for its plums or pears, while scarce any of them can make up a collection of *all kinds* of trees of the best quality. In this respect the subscriber flatters himself that he possesses peculiar advantages. His own nursery is not extensive or forward enough to afford many trees for sale yet, and his acquaintance with nearly all the most eminent nurserymen in this country, and of the peculiar excellencies of their respective establishments enables him to select from them all, probably a better collection of fruit trees than any one of them can furnish. Trees ordered from any particular nursery, or to be selected by me, will be charged at nursery prices and 10 per cent commission added. Orders ought to be forwarded immediately, and all confided to the subscriber's agency shall receive his best attention.
I. I. HITCHCOCK,

WESTPHALIA GEESE.

A FEW pairs of these very superior Geese are now ready for delivery at 5 dollars a pair. Apply to I. I. HITCHCOCK,
no 18 Amer. Far. Estab.

WHITE TURKIES.

I HAVE now ready for sale several pairs of these truly beautiful fowls, at $5 a pair, they are of this year's crop. I. I. HITCHCOCK,
no 18 American Farmer Establishment.

THE FARMER & GARDENER;

AND LIVE-STOCK BREEDER & MANAGER.

CONDUCTED BY I. IRVINE HITCHCOCK, AND ISSUED EVERY TUESDAY FROM THE AMERICAN FARMER ESTABLISHMENT, AT $5 PER ANNUM, IN ADVANCE

No. 33. **BALTIMORE, DECEMBER 16, 1834.** **Vol. I**

☞This publication is the *successor* of the late
AMERICAN FARMER,
(which is discontinued,) and is published at the same office, at five dollars per year, payable in advance.
☞When this is done, 50 cents worth of any kind of seeds on hand will be delivered or sent to the order of the subscriber with his receipt.

American Farmer Establishment.

BALTIMORE: TUESDAY, DECEMBER 16, 1834.

INTERNAL IMPROVEMENT—There is no class of citizens more deeply interested in the improvement of the country by canals and rail roads than the farmers. The produce of mother earth, whether of her scratched pate in the form of vegetable products, or of her bowels in that of minerals, must still constitute the chief burden of our grand system of transportation, and consequently be of primary importance to the farmer. We rejoice in the extension of our facilities for quick and cheap conveyance, and especially in the spirit which is actuating those of our citizens who are deeply interested in the completion of the Chesapeake and Ohio canal to Cumberland. A convention of delegates from the whole country contiguous to the line of that great improvement from Baltimore to the Ohio river, was recently held in this city for the purpose of concerting measures to complete that great work to Cumberland, which seems likely now to be effected within a reasonable time.

A SOLID COMPLIMENT TO REAL MERIT.—Stars and garters and crosses and scraps of ribbon and titles, are frequently awarded by kings to those who have done something that entitles them to such rewards, and generally the *intrinsic value* of the award is just about equal to the real merits of the receiver. In our own country *shining* qualities or *bright* actions are frequently honored by gifts of swords, services or pieces of plate, &c.—Political orators, (for the most part a *hungry* set,) are rewarded with dinners and stimulated with wine, which makes them wonderfully eloquent. But we do not remember ever to have witnessed a compliment in all respects more suitable in its nature and application, than the one recently paid to the persevering and energetic President of the Baltimore & Ohio Rail Road Co. Philip E. Thomas, who has in the discharge of his official duty, displayed qualities which would have done honor to the foremost in either the cabinet or the field. In the construction of the lateral rail road to Washington, a bridge or viaduct, built entirely of granite, has been thrown over the Patapsco river, that surpasses in magnitude and solidity any other structure of the kind in the United States, if not on the whole western continent—and this elegant and solid structure has been named most appropriately THE THOMAS VIADUCT.

FAIRS.—"A writer in one of the New England newspapers suggests the establishment of an annual wool-fair.—This appears worth attending to, as the convenience of both buyers and sellers is promoted by their having a general place of meeting. In England there are horse-fairs, sheep-fairs, cattle-fairs, hop-fairs, and probably many others: in Germany there are book-fairs, linen and cotton fairs, wool-fairs, and the like; whereas almost the only fairs in this country are fancy-fairs! These latter usually offer a most attractive scene from the numbers of beautiful females who grace the stands; and they are often made beneficial to some public charity; but they do not subserve the great interests of agriculture or manufactures.

Were an extensive wool-fair established, it is probable that farmers and graziers would pay more attention than they now do to the growth of their flocks, in which case this country might supply England with a large part of that quantity which she now imports from Spain and Germany. The coarse wool she obtains from her own sheep, but the fine she is compelled to import from countries having a different climate; and it is, perhaps, worthy of note, that the best quality is from Botany Bay.

As this country possesses every apparent advantage of soil and climate, she might, with proper attention, soon rival any other country in the world. The subject being important, we take the liberty of recommending it to our neighbor, the editor of the Farmer and Gardener, whose zeal in the furtherance of agricultural interests, is known in this and some of the neighboring states, and who may therefore be supposed to have more influence on the subject than can be claimed by us."

The above is from the Baltimore Gazette. We are decidedly in favor of fairs for the exhibition, sale and exchange of agricultural products, and *ideas*; but we doubt the practicability of getting the attendance of farmers, at least for a while, to a fair restricted to any *one* article of product of their farms. We would rather suggest a general meeting or fair in the fall of the year, for all those articles, which the summer may have furnished for the market. The trade sales of our booksellers are upon the *fair* principle exactly—these sales are conducted by certain rules, and from their increasing frequency and extensiveness, they seem to answer the purposes of the trade exceedingly well. Now we would again urge the importance of a general meeting of farmers, at some central point, in each state at least, about September or October in each year, to buy and sell, and inspect, and exchange agricultural commodities of all kinds—wool, live stock, seed grain, implements and machines (in action,) and indeed to do the thousand and one good and profitable deeds that may well be done at such fairs, and what is of vast importance, get acquainted with each other. ☞N. B. and subscribe and pay for their agricultural paper.

GAMA GRASS AND GUINEA CORN.

Extract of a letter from a subscriber, dated
LOWNDES COUNTY, Alaba. Oct. 27, 1834.

Crops of cotton and corn were never more abundant than this year, in this section of the country—and thus far we have had a good season for gathering. Our cotton commands now in Mobile from 13 to 14¼ cents per pound.

I can send you annually any quantity of the Gama grass roots packed in light rotten chaff—they will bear seed abundantly the first year. The soil in which it is found in this section of the country is the richest river bottom lands. The Guinea Corn is an article I have not seen noticed in your paper; I planted a few rows in my garden last April, and which I cut every fifteen days for three months, at which time it was neglected, and although we have had several severe frosts, it still springs from the roots, though it will not stand the winter. It will yield a third more than the Gama grass under equal soil and treatment; it is more succulent also.

WORKING MEN—who are they? or rather who are not working men? Farmers and mechanics are so called—but he is *best* entitled to this appellation who labors hardest to live without working—the seeker for a petty office—he who spends a thousand dollars in electioneering for an office worth only five hundred, and ten to one misses it after all.

THE FARMER.

[From a British treatise "on the Science of Agriculture."]

ON PLANTING ORCHARDS AND MAKING CIDER.

By introducing the subject of cider, my object is not to enter into the history of the apple, nor to discuss the merits of the different modes of making cider, nor to describe the vast variety of cider fruit; but knowing that certain prejudices and erroneous opinions exist, that much depreciate the value of that, which, when well made, is a wholesome and delicious liquor; and that such prejudices and opinions absolutely deprive many districts of the profit and pleasure, resulting from the growing and making good cider; I entertain the hope of being able to state such observations and facts, as will assist in removing those obstacles.

In the first place, it is a general opinion that the *soil* of those districts that are famous for good cider, such as Devonshire, Herefordshire, Somersetshire, &c. is the grand cause of the superiority of their productions; but this is an egregious error; it is by no means the case; the *soil* has little effect on the *quality* of the cider; as it is well known that in those counties, celebrated for good cider, the prime ciders are produced on soils of directly opposite qualities. However, to convince my neighbours of Wiltshire, that the cause of their inferiority was in their bad assortment of apples, and not in their soil or climate; I, many years since, selected some apples of the sort there called the cadberry, which grew in a very poor, shallow, black, gravelly soil, resting on a chalk subsoil; and made cider from them: and this cider proved, and was allowed by many good judges who tasted it, to be as rich, strong, and fullbodied, as any that grew on the richest lands, or most famous districts. I also gathered from one tree of the sort called the golden ducat, growing on a soil of the same description, forty bushels of apples, and these were made into cider, which, like the apple itself, proved to be a brilliant, sparkling, delicious, vinous liquor. In the same orchard the greater part of the apples were of the worst sorts, green, thin and sour; and when mixed, made a thin sour cider. I also, by way of demonstration, made cider from various other fruits separately, and among the rest, of a green hard apple, called the stone pippin, which being well known to keep well, and after long keeping, to ameliorate and become palatable; I wished to prove if the cider also would improve by keeping: which it did not, but was always like the apple, thin and sour. Hence it must be obvious, that as far as the soil is concerned, the same sorts of apples grown in any part of the kingdom, will produce cider of equally good quality; indeed, every person knows that a nonpariel is a nonpariel, and a golden pippin, a golden pippin, in all places alike; the only difference that can arise in the soil, is in the supply of moisture and manure; the greater the supply of these the greater may be the quantity; but the quality will be more aqueous, and of course less valuable. The quality will be chiefly influenced by the climate and exposure, as it may affect the ripening, for the riper and dryer the fruit, the richer and more spirituous the cider; and these things vary in their effect on apples, as much in one county as another.

Another very prevailing opinion is, that a good eating apple cannot be a good cider apple; and that a good cider apple is not to be selected by its taste, or effect on the palate; but this is equally erroneous. A person may not be able to ascertain the exact specific gravity of the juice of an apple by his palate; but the general character of an apple may be correctly ascertained; and the character or qualities of the cider, will always be found to prove very nearly the same as the apple. Thus, a rough sweetapple will give a rough sweet cider, a thin sweet apple, a thin sweet cider; and an acid and sour apple, an acid and sour cider; but generally, the rough asperity of an apple and the aromatic flavor will remain in the pulp, or pass off in fermentation. Another erroneous opinion is also very generally prevalent, that a mixture of apples makes the best cider; but as a general proposition, a simple view of the thing must show its absurdity. If there be a good cider apple, and a bad cider apple; how can an union of the bad, make the good better? The fact is, fermentation possess the greatest influence in determining the quality of the cider; and it is a law of nature, that without a perfect vinous fermentation, there cannot be a perfect vinous liquor. Now it is well known, that two sorts of apples may be selected, the juice of one of which will commence fermenting in two or three days, and that of the other, not in less than eight or ten days. It must then be obvious, that as the early fermentation of the one, will force the backwardness of the other, and the late fermenting will check and retard the early, there can be no perfect fermentation with either; and consequently no perfect vinous liquor: and this principle will undoubtedly operate, with the fruit from the same tree, as some must unavoidably be better ripened than others; and therefore, in this case, if the ripest were selected and separately made into cider, the quality would prove superior to that made of those that were less ripe, or if made together. After cider is made, indeed, it may by mixing, be made more suitable for peculiar, or general purposes, and thus be said to be better for mixing; but mixing the apples must be a pernicious and unprofitable practice.

The science of fermentation is most important to all who make cider, or wine, or beer; and those who wish for information on this subject, may find it in a valuable little book, by Maccullock on wines.

The health, duration, and prolificacy of apple-trees, as well as all other fruit-trees, are more dependent upon the subsoil than the surface-soil; in planting trees, therefore, this requires more attention than is generally given to it. Healthy and prolific apple-trees will seldom be found where the subsoil is of a cold, tenacious, wet, and stagnating quality; and whatever may be the nature of the surface-soil during very dry summers, the roots in search of water will delve deep into the subsoil, and having penetrated, however low, there they must remain; they cannot get back again. In all cases, food selected deep in the soil, is aqueous and unwholesome; and if the water be stagnant, the roots canker and rot in the winter, which vitiates the sap, and thus the tree becomes cankered and diseased; and a tree thus situated, although it may for the few first years produce fine fruit, and afterwards, generally produce strong fine shoots in the summer, these will become diseased, and often die in the winter or spring. The fruit, also, when a tree is in this state, is generally vapid and imperfect, and a crop very uncertain.

In planting orchards, therefore, it will be necessary, to ensure success, or permanent and progressive prolificacy; to guard against those casualties, by underdraining and supplying water on the surface, during very dry weather. But the most effectual mode will be, in improper subsoils, to form an artificial rock, as a foundation on which to plant the trees, about a foot or a foot and a half underneath the surface of the soil, which may be easily done by removing the soil to the required depth, and laying a kind of floor of stones, bricks, tiles, or slates, taking care that the joints be well closed or stopped with cement, that the roots may not penetrate, as a tree extends its roots, even farther than its branches. To make the foundation quite perfect may be expensive, but it must be considered, that the work thus done is for ever done; it will not require repairing: and the additional prolificacy of the trees, their healthy duration, and the superior quality of the fruit, will make an ample return. However, where the expense of paving to a full extent cannot be afforded, even three or four feet square immediately under the tree, will be a great protection: it will, at any rate, give a right direction to the roots in their first outset, and prevent the formation of taproots, which are bad things in fruit-trees.

As the figure of a tree, or its shape and form, determines its power of sustaining weights on its branches, and of resisting the wind; and its prolificacy, in a great measure, depends on the due and regular expansion and exposure of its branches equally to the influence of the sun and air, this should be attended to on its first formation or grafting. And if the following particulars in the mode of managing it are attended to, they will be found to produce a tree of that shape and strength, that will be equal, in every respect, to its wants.

Whether the tree be intended to be raised by inserting the graft near the ground, or at a sufficient height to form a head, only one graft should be permitted to remain; and this should be trained up, with a single stem, to the utmost height of its growth, and never stop'd or cut back. The horizontal branches or head will then be found to form itself, by pushing out shoots immediately around the point of the year's perpendicular shoot or stem; and as this will be long or short, according to the soil and situation, the horizontal tiers of branches will be at proportional and proper distances; and thus the tree will assume the shape and growth of the fir or the wild cherry-tree. If any irregular shoots should push out on the sides of the stem, or too many horizontals, they may be removed. And if the perpendicular stem or leading shoot should be destroyed, one of the horizontals may be fixed up perpendicularly to fill its place, which it will soon do, and the knife will not be required to be used for any other purpose. A tree formed in this manner, will apply all the sap furnished by the roots to a profitable purpose; and as it will never be headed, or cut back, its progressive or annual increase will be effective. And, as I have before observed, it being a law of nature,

that no tree shall bear fruit until it has obtained a surface of stalk, branches, and leaves, proportioned to the food it takes up, this law will be fully supported; and the tree will attain the fructiferous state at the earliest possible period. The practice of cutting back trees, or topping off and shortening the branches, for the purpose of increasing its prolificacy, or of making it more healthy and strong, or of preventing premature exhaustion, is founded on a most egregious error. Whilst the roots grow unchecked, they will continue to collect and supply the same quantity of food, whether a tree be permitted to assume its natural figure, and to extend itself in a proper direction; or whether the branches be shortened every year, and it be thus compelled to form them in useless, shapeless clusters; the cutting back, therefore, cannot prevent the tree exhausting itself, or the soil it grows in. And can it be supposed any one will hesitate which to choose,—whether the food collected by the roots, shall be appropriated in the production of fruit; or that of forming useless branches to be cut off and thrown away; or if suffered to remain, to overshadow and smother each other?

MEXICAN PRODUCTIONS—TERMS OF EMIGRATION TO JICALTEPEC. By D***.

[From the Quarterly Journal of Agriculture, Mechanics, and Manufactures.]

Plantation of Jicaltepec,
State of Vera Cruz, July 27, 1832.

My Dear Sir,—According to promise, I will send you for the present a few hasty particulars concerning this place, reserving a more minute detail for my future communications. As I informed you before I left New-York, it is a very extensive tract, consisting of at least twelve, or more properly, twenty square leagues of land, of every variety of aspect. It is watered by a fine river, with its tributary branches. The soil is the richest I ever saw, and the climate most favorable to vegetation. Every thing grows with the greatest rapidity and luxuriance. Indian corn attains the height of twelve to fifteen feet; this does not apply to a few isolated stalks, but to the entire plantation of corn, consisting of forty or fifty acres, where six stalks grow in the same hill, and all are well supplied with ears. It is the same for every thing else. Potatoes were planted some time ago, and in forty days the new potatoes were fit for use and were gathered. Coffee, and the sugar cane, of which large plantations have been commenced, succeed very well, and will, in a couple of years more, be a source of great revenue. There is not one tropical production, with which I am acquainted, that does not succeed well in this climate, and many are found in a state of nature on the plantation. The colonists here, so far, are few in number, all French; but the proprietor is very desirous to have some from the United States, farmers, mechanics, or artizans. I will state to you in brief the conditions on which colonists are admitted, or invited to come, and the inducements which the place holds out to the industrious and enterprizing, requesting you to give them publicity in your Journal. Should any applications be made, on information from you I will see that the necessary steps are taken to facilitate the emigration of those who may desire to join us.

The colonists may be either agriculturists, farm hands, or mechanics. As there is plenty of land here, the Franco-Mexican Company enters into the following arrangement with agriculturists, or other persons who may wish to employ a small capital in agricultural operations. Land is let to them in such quantity as they may desire, or according to their ability or means. The farms thus formed are supplied by the Company with the buildings necessary to lodge comfortably the colonist and his farm hands. The Company also provides the farm with the necessary implements, plants, and seeds, and furnishes the nourishment of those employed on it. It will be perceived, therefore, that the agriculturist is lodged and fed by the Company, has land, and implements, and whatever else is necessary for the cultivation of the earth, provided him, on the condition of his improving the land thus granted. Of the produce, two thirds belong to the Company; the remaining third belongs to the colonist *forever*.—He may sell his interest to another if he chooses, and retire; or he may retire and leave an agent or overseer on his farm, in which case his share of produce, one third, will be sent him wherever he pleases, in any shape he may desire. Nay, he need not even come here at all. One who has capital, (and a very small one will suffice,) may appoint an agent to take up land for him on the conditions above stated; or, what is better, he may signify to the Director of the Company his wish to take up a farm, and the Company, on receiving his remittances of the amount he may wish to invest, will open a farm and procure laborers, in proportion to the amount; bring the land into cultivation, and render him an account, every three months, of the state of his affairs; in a word, watch over them as if he were himself present. It will be seen at once that a permanent revenue may thus grow out of a small capital, and in a very short time, three years at most, after the commencement, for the objects mostly cultivated are vanilla, coffee, and sugar. Of these three valuable products plantations once established are permanent, and do not require to be constantly renewed. Vanilla is in full yield the third year after being planted; coffee in two years, (for the Company furnishes plants of a year old to commence with;) sugar cane in a year after the commencement of the plantation. Besides these, many other valuable articles may be cultivated, as chocolate, pimento, cloves, cinnamon, nutmeg, cochineal, tea, &c. all of which form permanent plantations, so that when the land is once brought into employ, the remainder of the labor is to gather in the produce.

Farm hands are lodged and fed at the expense of the Company, and receive a yearly salary, fixed by the Company at 400 francs, (about $80,) each man. If the hand be married, the wife also receives a salary of about $50; and if there be children of either sex above the age of 14 years, they also receive a salary of about $30 per annum, until their 18th year, when they have the same salary as above stated for grown persons. In the mean time, the children are educated at the expense of the Company, and if they or their parents, or any colonist, fall sick, they have the attendance of a physician, the use of the necessary remedies, and all necessary attention, not only without expense to themselves, but during the time of their illness they receive half of their regular salary. At the same time, they also have the right to take up land according to their ability. Farm hands form an engagement for three years, after which they are at liberty to make such arrangements as they think proper.

Mechanics are lodged and fed by the Company, and receive besides, for their services, such salary as may be agreed upon between themselves and the Director, or his agents. They also have the right to take up land, and employ hands to cultivate it for their profit, on the conditions above mentioned. Carpenters, blacksmiths, tinsmiths, potters, masons, wheelwrights, machinists—such are the mechanics most wanted here.

Another point to be considered is, that those who may settle, having their lodging and nourishment provided by the Company, are at a very trifling expense for their clothing, and some trifling articles of furniture. The climate is regular; there is no winter, no want of fuel or thick clothing; the coarsest material is the best, and where all live in the same simple style, there can be no necessity for expenses in this point; all absolute wants in other points are supplied by the Company.

The above statements are *facts*. The same statements, or similar ones, had been made to me previous to my coming to this place. I gave credit to them myself, because I knew I could rely on the character of him who made the statements. But I deferred giving them to any one for publication until I could say that I had seen myself what I stated. I have seen this land, its resources, its fertility, its advantages for commerce and improvement, and I know of no place where capital may be more advantageously employed. I do not hesitate to exhort those who are industrious and enterprizing, who are struggling to live on a small capital, to come here and employ their means in the manner explained above. They will have to labor hard for two or three years; they will have to endure privations for the same time; but at the end of that period they will be in the enjoyment of a certain revenue, which will augment every year thereafter. I speak of those who are industrious; let no one imagine that he may come here and be rich without work; that he will have no more to do than to gather up money from the earth and put it in his pocket; if he thinks so, he will find his mistake, and disappointment and misery will be the consequence. It is as impossible to grow rich in idleness in *this* country as in any other region.

I will gladly furnish any other particulars which may be desired. For the present, adieu. D***.

Remarks.—The Company to which the above refers is composed principally of very respectable French capitalists. Applications for further information may be addressed, post-paid, to H. F. Dickehut, Jicaltepec, care of Le Verger freres, at Vera Cruz.—*Ed.*

Method of Preserving Cheese from Worms and Mites.—Grains of whole pepper, put into a vessel in which cheese is kept, will drive away the above mentioned insects.

THE BREEDER & MANAGER.

[From the Farmers' and Graziers' Guide.]

NEAT CATTLE.—*Of foddering or feeding.*

[Continued from page 253.]

Neat cattle are very liable to be blasted when first turned into clover, or any of the artificial grasses. They are liable to this accident from two causes—the state of the animal, and the state of the grass.

1st. The state of the animal. If it be the first time, and she have a good appetite and a strong digestive power, she will eat with great avidity, and digest quickly for some time; but at length blood will be formed in excess, and the sensorium will be oppressed. The digestive power will then flag, but the appetite will continue until the third stomach becomes distended, and incapable of performing its office. The first stomach, or rumen, will then be overloaded, and incapable of bringing up the food for rumination, in consequence of which its contents will ferment. The air which is generated by the fermentation, will so distend, or stretch the rumen, as to prevent the descent of the diaphragm, and the influx of the blood into the lungs, so that the animal becomes in danger of instant suffocation.

It seems a singular circumstance that the appetite for food should continue after the digestive function has ceased; and it may be fairly presumed, that it is a circumstance that would never happen, were we to follow nature in the management of animals more carefully than we do. In the natural pastures, a cow would not be able to gorge herself in this manner: the great variety of herbage which nature has provided, induces them to move about, to find the herbs most agreeable to their palate, and which varies almost as much as our taste, owing, probably, to the state or wants of their bodies. When an animal that has been thus kept, is turned into a field of artificial grass, as it is termed, it is like a child in the shop of a confectioner, and eats much more than is proper; and all the evil consequences that would arise from repletion in the child, arises, but with twofold danger, in the cow.

It has been remarked by an intelligent farmer, that if cattle are turned into a piece of clover, or vetches, when the wind is in the east, it is almost sure to blast them; for then, he says, the leaf seems withered, and hangs down. In this state, perhaps, it is tough, and less easy chewed. He advises to turn them in when the grass is a little wet with dew or rain, and not to keep them at first more than ten minutes; they are then to be taken off for about half an-hour, and put back again for about ten minutes; after another short interval, they are to be turned out for good.

Mr. Lawrence advises farmers to keep a digesting place for cattle; that is, a piece of short grass, where they can find but little to eat, and must consequently use sufficient exercise in getting it. This advice is very good in all cases, particularly if such cattle be turned in, as have been eating freely of the mangel wurtzel, turnip, or the artificial grasses.

The second degree in which cattle are liable to be blown, when turned into artificial grasses, depends upon the state of the grass. If it be young and tender, as when moistened with a mild dew or rain, it is easily chewed, and being as easily digested, it passes readily; but if it be withered, it becomes tough, and not being so easily chewed or thrown up for rumination, lies closer or more compact in the first stomach, or rumen; and is then, upon the slightest exciting cause, very liable to ferment. A knowledge of these circumstances should certainly lead farmers to adopt the most effectual modes of prevention: to which end, in addition to those previously mentioned, may be added, cutting the grass occasionally, and feeding the cattle from cribs in some rough ground, or in a cow-house, or large yard. It is, however, proper to observe, that when the artificial grasses are used in this manner, they should not be cut or brought in, till the dew, if abundant, be dissipated; otherwise, the animal will eat with as great a relish as in the field, and overloading its stomsch, will be just as liable to be blown or blasted—Perhaps this inconvenience would be most surely prevented by giving the cattle but a proper quantity at a time; and by spreading it out a short time, particularly of a morning when there is no sun, before it is given.

Generally speaking, neither grasses nor herbs should be cut until the flowers begin to open; as before this period they are watery, and contain less nourishment; shortly after this, they become more and more fibrous, stemmy, hard, tough, and consequently less digestible. Grasses or herbs cut too early, from having their juices more abundant, but in a raw, crude state, are very liable also to produce a diarrhœa, or looseness in the bowels.

When cattle are put into a field, it should be after the dew is dissipated. If the pasture be short, they may be left at liberty; but if it be abundant, and consist of the artificial grasses, such as lucerne, vetches, clover, or the like, the cattle should each be confined by a rope to a picket or post fixed in the field, until they have ruminated; they are then to be fixed in another spot. This change ought to take place five or six times a day; otherwise, by allowing them a large space, and changing them only twice a day, they will be very apt to gorge themselves, or after satisfying their appetites, they will trample upon and spoil the remainder. But cows may be much benefitted by being raced round the meadow three or four times gently, when first turned in to feed.

Little and *often*, is a maxim which ought never to be lost sight of in feeding neat cattle, particularly milch-cows. By this method they thrive better, and give more and richer milk.

It is very necessary to take cows from the pastures during the heat of a summer day; as the great heat and the stinging of flies will cause a considerable diminution of the milk. Cows should be turned into a field or exercised in some way, every day, at all times of the year, unless the weather be very bad; during their time of exercise, their stalls should be well cleaned out, and fresh fodder put in. When cows are kept on dry fodder, it is of importance that it should be of good quality, and dispensed to them in proper quantity; and unless those conditions be carefully observed all other attention will be of little use. Fodder, that has been badly kept, or that has been heated, or become mouldy, or dusty, such as the sweepings of barns, is little better than the husks of grain mixed with dust, and contains little nutriment, and is productive of many disorders.

The second, or even the third crop of artificial grass when of good quality, and cut and saved in a favorable time appears to agree better with cattle, than the first crop, of which the stems are stronger, and more fibrous; and which are, in consequence, more difficult of digestion and less productive of milk.

It is commonly remarked on this subject by the most experienced dairymen, that the young shoots of grass which spring up after hay harvest, especially in or after showery weather, are particularly productive of milk. It is the same with the first shoots of grass in spring, or early in the summer. It is, however, at these periods, that cattle appear to be most liable to inflammatory diseases, arising from an excess of blood. The fresh, tender shoots are eagerly eaten, and being readily digested, form an undue accumulation of blood in the system. This superfluity of blood, is, it is true, generally carried off by an effort of nature, as it is termed; or in other words, a diarrhœa, or scouring, or bloody urine, takes place; sometimes, however, its effects falls more immediately upon a vital organ, and inflammation of the brain, the heart, or the lungs, ensues; and the animal is too often lost from a want of early and sufficient bleeding.

All the plants previously mentioned as adapted for green fodder, may also be given dry; as may also the straw of barley and oats; which, if given unthreshed, is infinitely better, more relishing, and more healthy; wheat straw, when good and fresh, the siftings of rye, peas, beans, barley, especially when boiled, bran chippings or raspings of bread, oil-cake, hemp-seed, beech mast, starch dregs, and brewers' grains, may be occasionally given with advantage, but not too much at a time, nor for a long continuance. One or more of these things should be occasionally mixed with boiled roots, the mixture given in small quantities, six or seven times a day, by which both the quality and quantity of the milk will be increased, and the trouble amply compensated.

Straw is made more palatable by mixing it with the skimming, or second crop of hay, which for this purpose should not be quite dry; but mixed with the straw by laying it layer upon layer at the time of stacking; and if sprinkled with water in which a small quantity of salt has been dissolved, it will be rendered more palatable; the sprinkling may be done at the time it is given, or, which perhaps is better, a few hours before.

It may be laid down as a rule, that when neat cattle are stinted in food, farmers lose twice as much by the loss of flesh and consequent deterioration in the value of the animal, as he can ever save in the price of the food. This remark is particularly applicable to the dairyman, even in a greater degree than to the farmer or the grazier: a cow should never be stinted, no more than overfed; for one that is well fed will keep her flesh and yield twice as much milk as two that are badly kept and stintingly fed. They should never be suffered to gorge themselves, for in that case they produce all the disorders arising from indigestion and repletion.

Give them their food
By little, and often,—but let it be good,

is the golden rule; and if this be properly attended to, and the necessary cleanliness observed, a healthy and productive stock will be the consequent and certain result.

One thing essential to be observed in feeding is, that neat cattle, but especially cows, should not pass too suddenly from green to dry food, or the contrary; a sudden change injures the digestive organs, and diminishes the quantity of milk; this shrinking is particularly observable when the change is from green food to that which is less succulent. In this case, therefore, as well as in changing one pasture for another, great care must be used, and perhaps this cannot be accomplished in a better way than in inuring them to the change by degrees.

During the war, when agricultural produce was high, a large sum of money was made by the sale of the following receipt for feeding neat cattle.—It was recommended by Lord Somerville, and many other noblemen and extensive graziers and agriculturists, as a most excellent and economical mode of feeding. But we cannot ourselves speak of it from experience, never having tried it. The receipt was sold for five guineas; and five hundred persons subscribed before the particulars were made known to any one of them.

Cut good sweet wheat straw into lengths of about four inches, and strew it, about one inch thick, over a very clean stone, tiled, or boarded floor: sprinkle over the straw just enough clean water to damp it, and add a thin sprinkling of barley-meal, or any other good meal, upon it. Then throw over the meal twice as much sweet fresh-cut meadow-grass as you put of straw. Again, strew an inch thick of cut straw, which sprinkle with clean water, as at first; and then add, as before, a thin sprinkling of barley-meal, and fresh cut meadow-grass. And so go on,—cut straw, water, meal, and fresh meadow grass, till you get as much as you can use in a day.

This being done in the morning, let it lie together till the evening, when it is to be turned, and mixed together in a heap: it should be given to the cattle on the following day.

Fatting Swine.—If your object is to fatten your hogs cheaply, you will allow them sufficient time for the process, and make them thoroughly fat before you kill them. It is best to begin to fatten them the latter part of August, or commencement of September, that they may be fit for the butcher before the weather becomes very cold, as it is hardly possible to make them thrive in cold weather.

A farmer stating the result of some experiments in Bath Society papers, vol. vi, p. 382, observes, "I invariably found that the quantities of food consumed (by fatting hogs) increased every week till the animal became three parts fat: after this period they eat but little, and almost all they eat turned to fat. It is therefore good policy to make them completely fat, and that only can be done by allowing them time."

It is said that hogs thrive best when there are but three or four in the same apartment of a pen. They are fond of society, though no better than a "swinish multitude;" when congregated in large assemblies, as they know no law but their own wills, and acknowledge no right but the right of the strongest, they sometimes condemn a weaker brother without judge or jury, and proceed to execute him without mercy. When, therefore, it is wished to fatten a considerable number, they should have several apartments separated by partitions, and there may be a general feeding trough, to which each division of animals may have separate access.

There is no greater mistake than that of gorging swine when first penned for fattening. They should on the contrary, be moderately and frequently fed, so that they be kept full, but do not loathe or reject their food; and in the end contract fevers and dangerous maladies, originating in a hot and corrupt mass of blood. In airy and roomy, yet moderately warm pens, well paved and boarded, they are healthy and thriving.—They show a disposition to be cleanly, however otherwise is supposed, and always leave their excrementitious matter in a part of the pen distinct from that in which they lie down. No animal will thrive unless it is kept clean.

Preserving Meat.—Meat may be preserved fresh many months by keeping it immersed in molasses. A joint of meat or any provision suspended in a flannel bag will keep sweet much longer than by most of the modes commonly practiced. The cooler and dryer the meat is when the flannel is put round it the better, and the flannel should be perfectly clean. Fresh meat put in a close vessel containing vinegar, will be preserved a considerable time. Tainted meat may be rendered good by pickling it in pearl-ash water some time. Before it is cooked, however, it should be dipped in vinegar a short time and then salted in brine.—*Genesee Farmer.*

To Destroy Vermin on cattle.—The following is an extract of a letter from our friend, *Edward Garrigues*, of Darby, (Pa.:)—

"Observing some observations relating to destroying vermin on cattle, I am also induced to remark, that a cow, much injured thereby, was cured immediately by rubbing down the spine, from head to tail, with Coc Indicus, or rather a decoction thereof, which produced an entire new coat of hair, and changed the appearance of the beast so much for the better, that the former owner would not have known her only by the mark of white on her hide."—*ib.*

Dear Haunch of Mutton.—When the present Duke of Bedford was Lord Lieut. of Ireland, he was once, when dining with Lord Sligo, earnestly recommended to taste a fine haunch of Glynde mutton, to which his Grace, himself a breeder and admirer of South Downs, and well acquainted with Mr. Ellman, readily acceded; but no politeness to his noble host would move him to finish the slice, or say it was other than rank in flavor and terribly tough. On inquiry the disappointed Marquis ascertained that his shepherd, who had been ordered to kill the best South Down Sheep, had, in accordance with the doctrines of political economy, which estimates every thing at its market price, actually slaughtered for the vice regal banquet a ram for which Lord Sligo had a few weeks before paid Mr. Ellman 200 guineas.—*Baxter's Library.*

THE GARDENER.

[From Bridgeman's Gardener's Assistant.]

HOP. Houblon. *Humulus lupulus.*

Although the Hop is not a culinary vegetable, as it is more or less used in every part of our country, it may not be amiss to treat of its culture. It is presumed, that in proportion as habits of temperance are inculcated, our citizens will have recourse to beer as a wholesome beverage; and as a great deal depends on the manner in which Hops are cured, I purpose giving directions for their management throughout; so as to enable those who choose, to prepare their own. My information is collected chiefly from Loudon's Encyclopœdia of plants.

The Hop has been cultivated in Europe an unknown length of time for its flowers, which are used for preserving beer. Its culture was introduced from Flanders in the reign of Henry the Eighth; though indigenous both in Scotland and Ireland it is little cultivated in those countries, owing to the humidity of their autumnal season. Like other plants of this sort, the Hop bears its flowers on different individuals; the female plants, therefore, are alone cultivated. There are several varieties grown in Kent and Surrey, under the name of Flemish, Canterbury, Goldings, &c.; the first is the most hardy, differing little from the wild or Hedge Hop; the Goldings is a very improved highly productive variety, but more subject to the blight than the other. The Hop prefers a deep loamy soil on a dry bottom; a sheltered situation, but at the same time not so confined as to prevent a free circulation of air. The soil requires to be well pulverized and manured previous to planting. In Hop districts, the ground is generally trenched either with a plough or spade. The mode of planting is generally in rows six feet apart, and the same distance in the row. Five, six or seven plants are generally placed together in a circular form and at a distance of five or six feet from each other. The plants or cuttings are procured from the most healthy of the old stools; each should have two joints or buds; from the one which is placed in the ground springs the root, and from the other the stalk. Some plant the cuttings at once where they are to remain, and by others they are nursed a year in a garden. An interval crop of Beans or Cabbages is generally taken the first year. Sometimes no poles are placed at the plants till the second year, and then only short ones of six or seven feet. The third year the Hop generally comes into full bearing, and then from four to six poles from fourteen to sixteen feet in length are placed to each hill. The most durable timber for poles is that of the Spanish Chesnut, which is much grown in Kent as coppice wood for that purpose. The after culture of the Hop consists in stirring the soil and keeping it free from weeds; in guiding the shoots to the poles, and sometimes tying them for that purpose with bass or withered rushes; in eradicating any superfluous shoots which may arise from the root, and in raising a small heap of earth over the root to nourish the plant. Hops are known to be ready for gathering when the chaffy capsulus acquire a brown colour, and a

firm consistence. Each chaffy capsule or leafed calyx contains one seed. Before these are picked, the poles with the attached stalks are pulled up, and placed horizontally on frames of wood two or three poles at a time. The Hops are then picked off by women and children. After being carefully separated from the leaves and stalks, they are dropped into a large cloth hung all round within the frame on tenter hooks. When the cloth is full, the Hops are emptied into a large sack, which is carried home, and the Hops laid on a kiln to be dried. This is always done as soon as possible after they are picked, or they are apt to sustain considerable damage, both in colour and flavour, if allowed to remain long in the green state in which they are picked. In very warm weather, and when they are picked in a moist state, they will often heat in five or six hours; for this reason the kilns are kept constantly at work, both night and day, from the commencement to the conclusion of the Hop-picking season. The operation of drying hops is not materially different from that of drying malt, and the kilns are of the same construction. The Hops are spread on a hair cloth, from eight to twelve inches deep, according as the season is dry or wet, and the Hops ripe or immature. When the ends of the Hop stalks become quite shrivelled and dry, they are taken off the kiln and laid on a boarded floor till they become quite cool, when they are put into bags.

The bagging of Hops is thus performed: in the floor of the room where Hops are laid to cool, there is a round hole or trap equal in size to the mouth of a Hop bag. After tying a handful of Hops in each of the lower corners of a large bag, which serve after for handles, the mouth of the bag is fixed securely to a strong hoop, which is made to rest on the hedges of the hole or trap; and the bag itself being then dropped through the hole, the packers go into it, when a person who attends for the purpose, puts in the Hops in small quantities, in order to give the packer an opportunity of packing and trampling them as hard as possible. When the bag is filled, and the Hops trampled in so hard as that it will hold no more, it is drawn up, unloosed from the hoop, and the end sewed up, other two handles having been previously formed in the corners in the manner mentioned above. The brightest and finest coloured Hops are put into pockets or fine bagging, and the brown into coarse or heavy bagging. The former are chiefly used for brewing fine ale, and the latter by the porter brewers. But when Hops are intended to be kept two or three years, they are put into bags of strong cloth and firmly pressed so as to exclude the air.

The stripping and stacking of the poles succeeds to the operation of picking. The shoots or bind being stripped off, such poles as are not decayed are set up together in a conical pile of three or four hundred, the centre of which is formed by three stout poles bound together a few feet from their tops, and their lower ends spread out.

The produce of no crop is so liable to variation as that of the Hop; in a good season an acre will produce 20 cwt. but from 10 to 12 cwt. is considered a tolerable average crop. The quality of Hops is estimated by the abundance or scarcity of an unctions clammy powder which adheres to them, and by their bright yellow colour. The expenses of forming a Hop plantation are considerable; but once in bearing, it will continue so for ten or fifteen years before it requires to be renewed. The Hop is peculiarly liable to diseases; when young it is devoured by fleas of different kinds, at a more advanced stage it is attacked by the green fly, red spider, and ottermoth, the larvæ of which prey even upon its roots. The honey dew often materially injures the Hop crop; and the mould, the fire-blast, and other blights injure it at different times towards the latter period of the growth of the plants.

The young shoots of both wild and cultivated Hops are considered by some as very wholesome, and are frequently gathered early in the Spring, boiled, and eaten as asparagus. The stalk and leaves will dye wool yellow. From the stalk a strong cloth is made in Sweden, the mode of preparing which is described by Linnæus in his Flora Suecica. A decoction of the roots is said to be as good a sudorific as Sarsaparilla; and the smell of the flowers is soporific. A pillow filled with Hop flowers will induce sleep, unattended with the bad effects of soporifics which require to be taken internally.

[From the New York Farmer and Gardener's Magazine.]

Use of Tanner's Bark in Cultivating the STRAWBERRY.

Mr. Editor,—I have a word to communicate upon the culture of the Garden Strawberry, that most delicious production of earth. I do not speak of the *kind*, or the *quality* of this fruit, but of the *method* to be adopted in cultivating any kind of it, in any soil. It is well known to all who have cultivated the strawberry, that much pains are requisite to keep a strawberry bed clear from grasses, and the too rapid increase of roots and runners which hinders the fruitfulness of the parent stock. Indeed, such persevering attention is required during the summer months to clip the runners or tendrils of the strawberry, to prevent their covering the whole ground, that were it not for the deliciousness of the fruit, and the convenience of having it at hand for so long a portion the season, I would have relinquished the culture of it.

But while I was preparing my strawberry bed the last spring, and was speaking to a friend who had visited me from a distance, of the labor that was requisite to cultivate the strawberry with success, he said to me, "I have seen in one instance, in my part of the country, the expedient of applying tanner's bark, such as is used for banking houses for the winter, to the strawberry bed, filling the space between the hills to the depth of three or four inches." I asked him the utility of that. He said "it possessed the two-fold advantage of preventing the growth of grass between the hills, and the fibres of the tendrils from striking into the ground and becoming roots to new stocks, whilst it did in no sense prevent the growth and fruitfulness of the hills." This appeared so rational that I at once applied the bark, and found it to succeed beyond my expectation. I had no occasion to hoe my strawberry bed through the season. If a grass appeared through the tan, I could remove the tan with my fingers and extract the weed from the roots, and replace the tan; and if a runner shot forth its fibres into the tan, and they became roots, it only required to raise the runner with the finger, and it would quit the bark the whole length of the tendril, with the greatest readiness, because there was not soil enough in the bark to fasten the roots, and the bark being coarse and dry, it would fall from the fibres as soon as the runner was raised. My strawberries did as well as others this season, with one half or third the labor they formerly required; and I thought the tan prevented the too powerful action of the sun upon the roots of the strawberry, while the reflection of the sun from the surface of the bark tended to mature the fruit. There is another advantage derived from the tan: it prevents the strawberries from becoming covered with dirt, as they ordinarily are, during showers and heavy rains; and the tan, instead of detracting from the beauty of the garden, actually contributes to it. The green hills of the strawberry rising up through the red tan in regular order, have something of the appearance of verdant islands rising out of a placid ocean. I apprehend, likewise, that the tan will prove a defence to the roots against the freezing and thawing of winter, but I have not had experience in this. In the spring, when the bed is to be cultivated in the usual manner, we have only to scrape the tan aside, and replace it as soon as the the bed is made. I should select tan that had been drenched by the snows and rains of one winter, lest there might be too much astringency in the bark directly from the vat of the tanner.

I am, very respectfully, yours,

H. H.

Oct. 24, 1834.

REMARKS.—The writer of the above is a clergyman, who has written some of the best communications that have appeared in the Farmer. He pays for his subscription in the above currency. We should be pleased to receive the same payment from other clergymen.—[ED. N. Y. F.]

[From the Northampton Courier.]

CULTURE OF SILK.

The Secretary of Hampshire, Franklin and Hampden Agricultural Society, furnishes us with the following facts in relation to Silk Worms and Mulberry Trees:

At the late show of the Hampshire, Franklin, and Hampden Agricultural Society, Elizur Goodrich, jr. esq. presented a claim for premium on white mulberry set on his farm in Montgomery, in the county of Hampden, and obtained the first premium. He states than in 1833 he had 9000 mulberry trees set on one acre, the rows 4 feet apart, and trees 12 to 18 inches apart in the rows. In 1834 had 20,000 mulberry trees set on three acres, the rows 6 feet apart and trees 12 to 18 inches apart in the rows; also, 9000 mulberry trees set on four acres, the rows 6 feet apart and trees 3 feet apart in the rows; that he planted potatoes between the rows, had a good crop, and found the cultivation of the potatoes was advantageous to the mulberry trees. Expecting to use the leaves in the manufacture of silk, he intends to keep the trees cut down to 6 or 8 feet, for the convenience of gathering leaves. The trees are from 3 to 4 years old and very thrifty.

Mr. Timothy Smith of Amherst, in the county of Hampshire, also presented his claim for premium on the white mulberry, and obtained the society's premium. He represents that he has 17,443 white mulberry trees, of which 3638 are set out on about 100 rods of ground, in rows 8 feet apart, and the trees 2 feet apart in the rows, residue set more compact for the purpose of topping to feed worms. He planted potatoes between the rows, had a great crop, and found the hoeing among the potatoes beneficial to the mulberry trees. From the experience he has had in feeding worms, calculates that half an acre set with white mulberry will produce feed for 100,000 worms,—says he has what he considers five species of worms, viz: the black annual worm, producing *one* crop in a year of *yellow* cocoons; also the black worm, producing *two* crops in the year of *yellow* cocoons—the grey worm—the large white and the small white worm, producing two crops a year of *white* cocoons. The present year has fed only about 30,000 worms, but thinks his mulberry trees might give sufficient food for an *hundred thousand* worms.

He had worms on feed when the late severe frosts came, and gathered a quantity of leaves while frozen, packed them in a sack which had been used for salt; in this state the leaves were kept green and in good condition, so that he fed his worms two weeks with them, and the worms devoured them with the same avidity as before they had been frozen. The frost completely destroyed the leaves remaining on the trees. Mr. Smith now thinks that leaves may be preserved through the winter for winter and early spring use. He has 357 promising seedling plants of the Morus multicaulis, the product of one paper of the Chinese mulberry seed which he had of the society last spring. On this subject the committee would remark, that from the *source* and *peculiar* circumstances under which the seed was obtained from the interior of China, it is believed to be *genuine*, and not improbable the first good seed imported. The seed has been distributed into several towns in the county, and generally given a good return, unless when planted or sown too deep. The most favorable depth is about one quarter of an inch, regard being had to the soil.

The seedlings of the present year standing some distance from each other, gave outside branches, some of which, as an experiment, were made into cuttings, set in the ground with one bud exposed, and did well, although done in a very hot and dry season, and while the branches were green and tender. Some seedlings of the present year produced leaves measuring 9½ by 8½ inches before the severe frost, and had the weather continued mild a few weeks longer, it is thought some leaves would have attained the size of 12 to 14 inches. Some seed was sent northerly and southerly to a considerable distance, and one parcel to the distance of 5 or 600 miles, and did well. Should no more seed be received from China, there is now a sufficiency of grown trees and seedlings in such forwardness, as in a short time to supply the whole limits of the society with the real Morus multicaulis.

A Lapland summer, including also what in other countries is called spring & autumn, is 56 days.

MISCELLANEOUS.

HUMAN WEIGHT AND HEIGHT.

From observations recently made in Europe, it appears that the average weight of male infants at birth is about 6½ lbs. and the height 1 foot 5¼ inches. The average weight of females at birth is a fraction less than 6 lbs. and the height 1 foot 5¼. These facts seem to prove that there is a natural inequality in the two sexes both as respects weight and height.

From birth to the age of seven days, the infant is said to lose in weight. From this time, however, its weight increases. This, if true, is a very curious circumstance.

Man attains his greatest weight at 40 and begins to lose very sensibly at 60; woman does not attain her weight till 50; but she does not appear to gain perceptibly from the age of 18 to 40.—Both sexes at the period of complete developement, weigh about twenty times as much as they did at birth.

In old age both sexes lose about 10 or 12 lbs. of their weight, and three quarters of an inch in height.

The average weight of adult males, according to the foregoing estimate, is about 130; that of females a little less than 120. The average weight of males (old or young taken together) is 96 pounds; that of an individual without any reference either to age or sex, 91 pounds.

The height of the Laplanders and Patagonians—the two extremes of the human race—is as follows:

The Laplander is from 4 to 4 feet six inches high. His average height is not far from 4 feet, and the women are nearly the same. The Patagonian males are from 4 feet 6 inches to 6 feet 3 inches. The women are generally 7 to 8 inches shorter.

It is thought that the climate and locality have less to do with the stature of men than the race, though climate doubtless has some influence.—The Pickerais, close by the Patagonians, are much inferior in height; and the Silesians, who are a short people, live near the Saxons, who are probably the tallest people in Europe.

The foregoing estimates are derived from the London Medical Gazette; and so far as weight is concerned, are based chiefly on observations made at the city of Brussels. We believe that there is a greater inequality between the adults of the two sexes in America than in Holland; that infants are heavier; and that the adult males of New England are 10 to 1 at the least, heavier than those of Brussels. We are also of opinion, that the average height of the men of Patagonia is rather more than appears from the above statement. We think it is nearly six feet.

Shoe Blacking.—Perhaps the best in the world is elder berries. Mash the berries with your hand in a large kettle of water, set them in the shade a few days, filling them up with water. After it is cool, strain and wring them thro' a coarse cloth, and then boil it down to the thickness of molasses. Put a small quantity with a feather on a brush, rub the shoe till there is a fine gloss. The same will make good writing ink.

In the last number of that excellent publication, the People's Magazine, published every fortnight at the low rate or one dollar a year, there is an article headed "Burning green wood," which contains information that may be valuable to many of our readers at this season. It is a common opinion that a little green wood mixed with dry makes a fire hold out longer. The green wood certainly burns longer than the dry; for a great deal of heat from the dry is taken up in evaporating the water or sap of the green. It is calculated that an average cord of green wood contains about 140 gallons—more than two hogsheads—of water. It is also ascertained that the heat required to evaporate this quantity of water, would raise thirteen hogsheads of water to a boiling temperature. Now, if two millions of families in the United States burn upon the average a cord of green wood each, in the compass of a year, the loss of heat would be sufficient to boil more than 27 million hogsheads of water; and if it takes a cord of good wood worth $4 to raise 100 hogsheads to boiling heat, the amount of the loss would be about a million of dollars.

The farmer who brings into town a cord of green wood, has as heavy a load as another who should put on the top of dry white oak three quarters of a cord of seasoned pine, or one hogshead and two barrels of water.

A table is given in the article, from Brown's Sylva Americana, to show the relative quantity of charcoal, or real combustible matter, in the various kinds of fire wood. Shellbark hickory is taken as the standard, and set down as containing 100 parts. In comparison with it, white oak contains 81; white ash 77; scrub oak 73; red oak 69; black oak 66.—*Baltimore American.*

Wholesome Meat.—All meats, say writers on medical subjects, are best when the animal is at maturity. Hence to delicate persons, chickens, lamb, veal, or pig are not near so wholesome or nutritive as beef, fowl, mutton and pork.

Pickling Pork.—The following is the method formerly practiced for *baconing*, or pickling pork, by the famous buccaniers of America. First, they cut the flesh into long pieces about an inch and a half thick; and, after sprinkling it with salt, and suffering it to remain in that state 24 hours, these slices were next dried in stoves till they acquired a bony hardness, and a deep brown color. Pork, treated in this manner, if packed in cakes, may be preserved for upwards of a whole year; and when soaked in luke-warm water, becomes plump, and has a rosy appearance. It likewise possesses a grateful flavor under the various forms of cookery, and it is relished by the most delicate palate.—*Domestic Encyclopedia.*

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BALTIMORE PRODUCE MARKET.

☞ *These Prices are carefully corrected every* MONDAY.

	PER.	FROM	TO
BEANS, white field,	bushel.	——	3 00
CATTLE, on the hoof,	100lbs.	5 00	6 00
Slaughtered,	"	3 00	4 00
CORN, yellow,	bushel.	54	55
White,	"	54	55
COTTON, Virginia,	pound.	12	15
North Carolina,	"	14	16
Upland,	"	14	16
FEATHERS,	pound.	35	37
FLAXSEED,	bushel.	1 62	1 65
FLOUR—Best white wheat family,	barrel.	6 00	6 50
Do. do. baker's	"	5 50	6 00
Do. do. Superfine,	"	4 75	5 00
Super Howard street,	"	4 62	4 75
" " wagon price,	"	4 50	——
City Mills, extra,	"	4 87	5 00
Do.	"	4 75	4 87
Susquehanna,	"	5 25	——
Rye,	"	4 00	4 12
GRASS SEEDS, red Clover,	bushel.	5 00	6 00
Timothy (herds of the north)	"	3 00	3 50
Orchard,	"	3 00	3 50
Tall meadow Oat,	"	2 00	2 50
Herds, or red top,	"	1 25	——
HAY, in bulk,	ton.	15 00	——
HEMP, country, dew rotted,	pound.	6	7
" water rotted,	"	7	8
HOGS, on the hoof,	100lb.	5 00	——
Slaughtered,	"	5 50	——
HOPS—first sort,	pound.	15	——
second,	"	13	——
refuse,	"el.	11	——
LIME,	bush	30	33
MUSTARD SEED, Domestic,	"	5 00	6 00
OATS,	"	30	32
PEAS, red eye,	bushel.	60	——
Black eye,	"	80	85
Lady,	"	100	——
PLASTER PARIS, in the stone,	ton.	3 12	——
Ground,	barrel.	1 37	——
PALMA CHRISTA BEAN,	bushel.	1 50	1 56
RAGS,	pound.	3	4
RYE,	bushel.	62	64
TOBACCO, crop, common,	100 lbs	4 25	5 00
" brown and red,	"	5 00	7 00
" fine red,	"	7 00	9 00
" wrappery, suitable for segars,	"	6 00	12 00
" yellow and red,	"	8 00	12 00
" yellow,	"	13 00	17 00
" fine yellow,	"	15 00	25 00
Seconds, as in quality,	"	3 50	5 00
" ground leaf,	"	5 00	9 00
Virginia,	"	4 00	——
Rappahannock,	"	——	——
Kentucky,	"	4 00	9 00
WHEAT, white,	bushel.	1 03	1 09
Red,	"	95	1 00
WHISKEY, 1st pf. in bbls	gallon.	31	32
" in hhds	"	29	——
" wagon price,	"	27	28
WAGON FREIGHTS, to Pittsburgh,	100 lbs	——	1 25
To Wheeling,	"	——	1 50
		washed.	*unwash*
WOOL, Prime & Saxon Fleeces,	pound.	50 *to* 60	24 *to* 26
Full Merino,	"	44 50	22 24
Three fourths Merino,	"	37 44	22 24
One half do.	"	33 37	22 24
Common & one fourth Meri.	"	30 33	20 22
Pulled,	"	31 33	22 24

BALTIMORE PROVISION MARKET.

	PER.	FROM.	TO.
APPLES,	barrel.	$2 50	$4 00
BACON, hams, new,	pound.	11	——
Shoulders,	"	8	9
Middlings,	"	——	——
BUTTER, printed, in lbs. & half lbs.	"	25	37
Roll,	"	15	25
CIDER,	barrel.	3 00	4 00
CALVES, three to six weeks old	each.	4 00	7 00
COWS, new milch,	"	22 00	30 00
Dry,	"	9 00	12 00
CORN MEAL, for family use,	100lbs.	1 50	1 56
CHOP RYE,	"	1 56	1 62
EGGS,	dozen.	19	20
FISH, Shad, salted,	barrel.	5 75	6 00
Herrings, salted, No. 1,	"	4 75	——
Mackerel, No. 1, 2 & 3,	"	4 87	7 00
Cod, salted,	cwt.	2 50	3 00
LAMBS, alive,	each.	1 25	2 00
Slaughtered,	quart'r	31	50
LARD,	pound.	8	9
ONIONS,	bushel.	62	75
POULTRY, Fowls,	dozen.	——	2 50
Chickens,	"	1 75	2 00
Ducks,	"	——	2 50
POTATOES, Irish,	bushel.	40	62
Sweet,	"	62	75
TURNIPS,	"	37	50
VEAL, fore quarters,	pound.	3½	4
Hind do.	"	6½	——

ADVERTISEMENTS

TO NURSERY MEN.

1630 Peach Stocks—One year old.
45 do. do.—two years old.
520 Pear do. two do. do.
740 Apple do. two do. do.
For sale cheap. Enquire at this Establishment.
Dec 9.

GRAPE VINES.

HERBEMONT'S Madeira, one, two, and three years old, from 25 cents to 75 each.
Isabella, two and three years old, at 25 to 50 cts each.
Catawba, one year old, 25 cts. each.
White Scuppernong, two years old, at 37½ cents each.
Sultana, one year old, at 50 cts. each.
Woodson, two years old, at 37½ cents each.
Red Bland, one year old, at 25 cts. each.
Are for sale at this establishment, and will be well packed to go any distance. no. 25

GAMA GRASS SEED

JUST received, and for sale at this Establishment—Price 50 cents per ounce.

PEA FOWLS.

ONE pair 2 years old, and one pair 3 years old, for sale at this establishment. Price $3 a pair. no 4

MORUS MULTICAULIS.

THE subscriber has on hand a few hundred of this celebrated Tree, unrivalled in the quality of its leaves as food for the silk worm, for which he is ready to receive orders (accompanied by the cash) with *particular* directions for the delivery of the trees on or after the first of Nov. next. Price 50 cents each, $5 per dozen, or $40 per hundred.

The success and ease with which this tree is propagated, the extraordinary quickness of its growth, the superiority of its leaves over *all* others for the silk culture, and its uncommon luxuriance and beauty, altogether recommend it to the favourable notice of *every farmer* as a most valuable acquisition. I. I. HITCHCOCK,
aug. 26 Amer. Far. Estab.

BULBOUS ROOTS.

HYACINTHS, Tulips and a general assortment of Bulbous Roots, suitable for the present season, for sale low at this establishment by
Oct. 28. I. I. HITCHCOCK.

BAKEWELL RAMS.

TWO Bakewell Rams of good size and quality, for sale by a farmer near Baltimore at $20 each. Apply to I. I. HITCHCOCK,

WESTPHALIA GEESE.

A FEW pairs of these very superior Geese are now ready for delivery at 5 dollars a pair. Apply to I. I. HITCHCOCK,
no 18 Amer. Far. Estab.

WHITE TURKIES.

I HAVE now ready for sale several pairs of these truly beautiful fowls, at $5 a pair, they are of this year's crop. I. I. HITCHCOCK,
no 18 American Farmer Establishment.

FRUIT TREES—CHEAP.

An Invoice of fruit trees from a first rate nursery, having been missent, is offered by the owner for sale a at reduced amount. The opportunity is a favorable one for procurring a lot of first rate trees, at a great bargain. The following is a list of the trees which are laid in the ground by the heels so as to continue unhurt till next spring if necessary.

APPLES.

2 Monstrous Pippin.
2 Flushing or Esopus Spitzenburgh.
2 Royal Pearmain.
2 Long Island Russet.
2 Winter Pearmain.
2 Alexander—a new Russian apple, very large and of great celebrity.
2 Rhode Island Greening.
2 Pomme d'appi, or Lady apple.
2 Carthouse.
2 Newtown Spitzenburgh.
2 Bellflower.
2 Vandevere.
2 Red sweet Vandevere.
2 Michael Henry Pippin.
1 Winesap.
1 Rambo or Romanite.
1 Large Yellow Newtown Pippin.
6 York Greening.
7 Red Streak.

PEACHES.

1 Teton de Venus.
4 Malcaton.
1 Lehman'scling.
2 Gough's Cling.
3 Oblong open Peach.
1 Fine Cling.
2 Early Etna.
4 Budded trees that have lost their labels.

PEARS.

2 Jagonelle.
1 Portugal.
1 Summer bergamot.
1 Ambert.
1 Butter.
1 Seckel.
2 St. Germaine.

PLUMS.

1 Peters' large Yellow Gage.
1 French do. do.
1 Gage.
1 Egg.
1 Imperial.
1 Bolmar's Washington.
1 Blue Damascene.

CHERRIES.

2 Morrello
1 Orleans.
2 May Duke.

QUINCES.

1 Portugal.
1 Orange.

The Invoice including packing mats, &c. amounts to $30, and the whole will be sold for $20, which may be sent to I. I. HITCHCOCK.
Amer. Farm. Estab.

AGENCY FOR TREES, &c.

THE subscriber respectfully offers his services to his customers and the public generally, as agent for the procurement of Fruit and other Trees. It may not be generally understood or duly considered, that few nurseries contain *all* kinds of trees in equal perfection. One, for instance, is celebrated for its fine apple trees, another for its peaches, and a third for its plums or pears, while scarce any of them can make up a collection of *all kinds* of trees of the best quality. In this respect the subscriber flatters himself that he possesses peculiar advantages. His own nursery is not extensive or forward enough to afford many trees for sale yet, and his acquaintance with nearly all the most eminent nurserymen in this country, and of the peculiar excellencies of their respective establishments enables him to select from them all, probably a better collection of fruit trees than any one of them can furnish. Trees ordered from any particular nursery, or to be selected by me, will be charged at nursery prices and 10 per cent commission added. Orders ought to be forwarded immediately, and all confided to the subscriber's agency shall receive his best attention.

I. I. HITCHCOCK,

THE FARMER & GARDENER;

AND LIVE-STOCK BREEDER & MANAGER.

CONDUCTED BY I. IRVINE HITCHCOCK, AND ISSUED EVERY TUESDAY FROM THE AMERICAN FARMER ESTABLISHMENT, AT $5 PER ANNUM, IN ADVANCE

No. 34. **BALTIMORE, DECEMBER 23, 1834.** **Vol. I**

☞This publication is the *successor* of the late
AMERICAN FARMER,
(which is discontinued,) and is published at the same office, at five dollars per year, payable in advance.
☞When this is done, 50 cents worth of any kind of seeds on hand will be delivered or sent to the order of the subscriber with his receipt.

American Farmer Establishment.

BALTIMORE: TUESDAY, DECEMBER 23, 1834.

SNAPPING FIRE-WOOD.—Chesnut and other kinds of timber that snap when burning, uniformly do so (when the logs are cleft or split) in a direction from the bark or outside, towards the centre or heart of the tree; therefore, if the wood be laid upon the fire with the bark outwards, or towards the room, the evil and danger arising from snapping will be obviated. TRY IT.

WORTHY OF NOTICE.—The farewell address of the late Editor of the "Southern Agriculturist," which we publish in our present number, is worthy the particular regard of every farmer and planter. Mr. Legare has served his patrons and the public long, faithfully, and we trust efficiently, as the conductor of a highly useful periodical; and we feel regret at thus parting with one who has been an honor to the fraternity of Editors. While our best wishes for his success in future employments, and for his general happiness, accompany him to the retirement he has chosen, we most heartily commend his "farewell address" to the serious consideration of every tiller of the soil, especially those of the Southern States. We deem it one of the most valuable articles which we have given our readers for a long time.

SEASONABLE CAUTIONS.—Will our readers excuse us for calling their attention to the necessity, at this season of the year, of great caution in the care of their fires, and more especially of the ashes removed from their fireplaces. Numerous indeed, and serious are the calamities, that occur every winter from the want of care in the disposal of the ashes by servants. An old box or barrel is such a handy thing in which to deposit them; and then, says the disobedient domestic, who has been told *never* to put them into any wooden vessel—(but *have* your servants been told it?)—la! I have put ashes into boxes and barrels hundreds of times, and never burnt a house yet; master is a great deal too particular about *some* things. We would say to housekeepers, look sharply to it; and provide some fire-proof receptacle for your ashes; and then, which is fully as important, see *yourself* that *it*, and nothing else, be used for this purpose.

In connexion with this subject, we would also strongly advise the protection by insurance against fire, of your buildings, and all other property liable to destruction by this remorseless agent. Insurance costs but little, and the thought of it at all times is so comfortable, and the benefit so important in case of accident, that we strongly recommend it to every property owner both in town and country.

One more danger occurs to our mind, that exists in nearly every family, especially where there are small children; it is that of their clothes being ignited by too near approach to the fire in cold weather. The best preventive of this calamity—too shocking to be thought of without a shudder, and yet of frequent occurrence—is a fire fender, made of wire, at least two feet high, to guard that fire at least where the children mostly stay, and at which they must be occasionally left by themselves. Therefore whoever has not insurance against fire, a fire proof for ashes, and a high fender for the nursery, will we hope, lose no time in procuring them.

THE MYSTERY SOLVED.—A subscriber who had been reminded that his subscription to the Farmer & Gardener was still unpaid, writes us (inclosing his money) as follows. TWO-THIRDS of our subscribers are at this moment in the same situation, and we are *suffering* for the pitiful $5 due from each, while they forget it! Let none think hard of our dropping them a request by mail, if on reading this, they forget the way to their pockets.

STAFFORD, Harford Co., Dec. 10, 1834.

Dear Sir:—Yours of the 8th just received. I have been a subscriber to your work since commencement, and it has not been from inability or unwillingness to pay the amount of subscription, but entirely neglect. Inclosed are $5, amount due you.—I have seen several communications in your paper recommending Bone Dust as a Manure—would thank you to inquire through your paper or otherwise, where the Bones can be procured in quantities, either ground or not, and the price at which this manure can be obtained. If to be had at any reasonable price, and in considerable quantities, much use would be made of it in my neighborhood.

Yours, respectfully, —— ——.

[Will some person who has the information asked for, be so kind as to communicate it through this paper? EDITOR.]

DAHLIA EXHIBITIONS.—The autumnal Dahlia Exhibition of London, held lately in the Surrey Zoological Gardens, was visited in one day by above twelve thousand persons, among whom was the Lord and Lady Mayoress, and a great display of beauty and fashion. The whole was quite a fete, the grounds being decorated with marques and fanciful booths, flags, &c. The full band of the Goldstream Guards was in attendance. Nothing but Dahlias were exhibited—yet the specimens consisted of many thousands—of richer and more varied colors than were ever before seen in England. The prizes given were worth contending for—one gentleman getting a rich gold medal for the best collection of one hundred blooms.

ACTION OF TANNIN, &C. ON THE ROOTS OF PLANTS.—M. Silvestre, and M. Payen, jun. French chemists, by a variety of scientific experiments, have adopted the following conclusions:—

1st. That Tannin, even in small quantities, acts deleteriously on the roots of certain plants:

2dly. That Acids in small proportions are hurtful to germination:

3dly. That Alkalies in small quantity are favorable to the progress of vegetation:

4thly. That the saturation of the acidity, developed during germination, hastens its progress and favors the ulterior development.

These experiments account for one of the useful effects of lime, of vegetable ashes, and calcareous marl, and for the the unfavorable influence of alkalies, *used in too great quantity, or unequally distributed.—Boston Courier.*

POTATOES.—It has been a mooted question whether it is a good plan to cut potatoes in planting. A correspondent of the New-England Farmer, Ellsworth, has made an experiment, by planting an acre in alternate rows. The rows of uncut potatoes produced 458 bushels; the cut potatoes produced 336; making a difference of 123 bushels in favor of the uncut. He however used 22 bushels more of seed in planting the uncut potatoes.—*Kennebec Journal.*

Invisible Visible Ink.—Mix alum with lemon juice; this ink will be invisible until dipt in water.

THE FARMER.

Farewell Address of the Editor of the Southern Agriculturist.

With the present number, we close our Editorial career, and retire once more into private life. This resolution has not been the offspring of the moment, but for sometime contemplated by us, and in carrying it into effect, we only perform that, which our other duties render necessary.

It is now seven years since first we commenced the task of Editing this work, and having brought it into existence, and conducted it thus far, we cannot part with it, and dissolve all our relationship, with its readers without regret. We have withdrawn from all agricultural pursuits, and it is more than probable, we shall never again resume the task which we now abandon. Other pursuits claim our attention, and our health requires that we should cease to labour at the desk. But we cannot thus sever the ties which have bound us together, as Editor and Reader, without feelings of melancholy regret, which is heightened, when we think that in now bidding you farewell, we bid you farewell forever. During the period we have laboured in this vocation, we have formed many valuable acquaintances: with some, we have become personally intimate, but with many, our intercourse has been but by letter, and yet, not the less familiar, for being personally unknown to each other. Wherever we have travelled in these States, we have found acquaintances, who have known us as Editor of this work, and who have most cheerfully extended to us all the hospitalities for which these Southern States have become so well and so justly celebrated. Wherever we have gone, we have had every facility extended to us for inspecting the agricultural operations of that particular section of country, and even the minor operations of plantations have not been hid from us. Our object in all our agricultural excursions has been, to gain information, that might be useful to our readers, and the planters of the South generally. Our motive appeared to be justly appreciated, and we have ever met with the greatest politeness and hospitality, whilst nothing which was thought worthy, was withheld from us, even when the practices were admitted not to be such as they might or ought to be. Nor has this been all. No sooner had it become known that we contemplated making such excursions, as frequently as other circumstances admitted than invitation after invitation was proffered to us, and it would take us many years to accept of all we now have on hand, devoting the time we usually allotted to them, and others have more recently been extended to us.

And now we part: but permit us at parting to point out a few of the defects, which appear most prominent to us, and to suggest a few improvements. In all we have to say, we must be brief, for neither space nor time will allow us more than merely to notice them.

The subject of Rotation of Crops and Manures—should command your serious attention. Without referring to the mooted point of what is the cause, or entering in the least into the discussion, it is sufficient for us to know, that any vegetable grown long on the same soil deteriorates, even when the ground is annually manured, unless the manure used, possesses the peculiar nutriment fitted for it, and so true is this admitted to be, that it is acted on even by the market gardeners, near London, where rents are enormous, and manures made free use of. It is stated, moreover, on high authority, that it is a practice with them to lay down a part of their grounds in grasses, finding that the rotation of garden vegetables is not sufficient, and that by pursuing this course, their profits are increased.

If then it be so necessary, where manures are used to such an extent, as would astonish us in this country, how much more necessary must it be where so little is used, and where the supply is so limited? Rotation of crops, is in some measure, a substitute for manuring, and it is well known, that after plants of a certain class, have exhausted the soil of all nutriment which will support them, other plants will grow most luxuriantly on it, and be for sometime very productive. These, in turn, exhaust the soil of their peculiar food, and have to yield their places to others. And such is the course pointed out by nature throughout the vegetable world, whether it be in the forest or in prairie, the cultivated or uncultivated land.

But a rotation of crops can seldom, if ever, be substituted for manuring, and should never be considered in that light, for although each plant may have a certain specific food, without which it cannot thrive, and which it may obtain by a change of soil, and which is not necessary for the healthy growth of other plants, which are to succeed, yet there are certain elementary constituents necessary for *all* plants, and which are required by all and consumed by all, and which can only be supplied by the annual decay of the vegetables which grow on the soil, or by manures. Where the operation is left to nature, the first takes place, but when man interferes, the second must be resorted to. The object, however, of manuring should not be merely to keep the soil at its pristine fertility, but to improve and make it more productive. To effect this, care should be taken that a greater quantity is added to a field than is taken from it. Nor should it be a matter of indifference what manure is carried into particular fields, for while some manures would be exceedingly beneficial in one field, they might be inoperative or the very reverse in another. Nor is it always necessary that the manure should contain either vegetable or animal substances. To a stiff clay soil, the addition of pure sand very often proves highly beneficial, and clayey is the proper corrective of a light soil. Wood ashes, lime and marl, are most excellent manures when properly applied. But of all manures, that which is obtained from the stable and farm-yard, is the most beneficial, and consequently most to be prized. The greatest attention, therefore, should be paid to the collecting and augmenting of it. We need not here enter more fully into this branch of our subject. Our readers need only to refer to the back volumes of this journal for all information necessary. The subject is undergoing investigation daily, and as these investigations shall bring to light new discoveries, they will be given in the *succeeding numbers* of this work.

The next subject we call your attention to, is the care of your *Live Stock*. It is all important to a planter, that he should have an ample supply of manure: with it he goes on to realize a fortune, and without it, he will at best, but remain stationary. How many planters have been ruined, and how many are there, who scarce make their income and expenditures meet: In many cases this is more owing to a neglect of collecting and applying manures, than any other cause. Content with what the natural fertility of the soil yields, the production of their fields become less in each succeeding year, and instead of supplying the waste which takes place, by the application of manures, they, in many cases, emigrate to the "far West," leaving all the comforts of civilization, and tearing asunder all the tender ties of early life. Others are content to drag on thus, provided they can but live; when it would require but little exertion on their part, to place them in comfortable, if not affluent circumstances.

A proper attention to the stock of the plantation, (for all have more or less) would go far to relieve the embarrassments of the planter, in this respect. Let his horses and cattle, his sheep and hogs, be properly attended to; let them be taken care of, during winter, and have their pens well littered, and he will be amply repaid by the quantity of manure he will have in the spring, to enrich those spots which are poorest. But even apart from the additional quantity of manure which would be made by proper attention, the many comforts yielded by a well kept stock of cattle, sheep and hogs, are sufficient inducements of themselves, to cause us to pay more attention to them than we do. Instead, therefore, of permitting them to roam at large during the winter, and losing a large number annually in the bogs of the swamps, let them be housed, fed, and well littered. Let no one say that this cannot be done, or only accomplished on a small scale. The success which has attended Dr. H. Ravenel, refutes this opinion. His stock is large, they are all housed and fed during the winter, and this is done by him, on three separate plantations, on each of which, the number of cattle, sheep and hogs, are considerable: nor does Dr. Ravenel possess any facility for feeding them, not within the reach of all planters; but he is provident, and his cattle fare well.

Another point to which we would call your attention, is the *want of system* on most of our plantations. It is but too common for all the operations of the plantation to be performed, as it were on the spur of the moment, and not with that order and regularity which should always govern. Were our plantations under a more systematic arrangement, the labourers divided and properly apportioned to the various works suited to their strength or ability:—the crops properly equalized as to quantity, so that neither may predominate to the injury of the rest; a strict accountability enforced, both from the overseer or manager, and from each driver or head of a gang; our planters would have far less trouble in the management of their plantations, and their profits, without doubt, be much increased. In order to facilitate these operations, as well as for reference, regular books should be kept, in which all the transactions of the plantation should be entered. As an example

of what can be accomplished, we refer our readers to the account of "Hopeton," (the residence of J. Hamilton Couper, Esq.) given by us in the 6th volume of this journal, page 333. This place is well worthy of the attention of all of our planters, more especially the young. It is certainly one of the best conducted plantations in the Southern States, and we have, as yet, met with none as well managed, either here or at the North.

And we would here suggest to our planters, (especially the young,) the propriety of annually appropriating some small portion of their time to making agricultural excursions, and of extending them into distant districts, so as to observe the practices of those who dwell far from them. In all of these excursions, much would be gained. The various plans pursued by each, in the culture of the same crops—the different modes of collecting and applying manures—the management of negroes—the division of labour among them—the various domestic improvements, together with the discussions which would arise from these topics, would impart new views, and afford a fund of information, highly useful to the tourist in particular, and if communicated for publication in this journal, would add much useful information to that which has already been collected in these volumes.

One other suggestion will we make; and it is one which we would wish to be taken into serious consideration. It is the appropriating a small portion of ground annually to the making of experiments in the culture of the various crops, now grown by us, as well as on such plants as it is desirable to introduce, either for use or ornament. With respect to those made on the crops now cultivated, but a very small share of extra attention would be requisite. It would be best, in most cases, to make the experiment in the field where the crop is growing, and where a fair comparison can be made, between that experimented on, and the crop cultivated in the usual mode.

In making these experiments, care should be taken to notice all the accompanying circumstances, and notes should be taken throughout, of all the changes, accompanied with remarks as to the supposed causes of these changes, and at the close of the experiment the greatest accuracy should be observed in ascertaining the result. It should not be left to be guessed at, as is unfortunately, but too frequently done. In a small experiment, a few ounces will make a very large difference in the result of an acre, and how much more in a field of several hundred acres, yet this small variation would not, in all probability, be perceptible to the eye. An experiment, therefore, should not be abandoned, or thought little of because to the eye, no striking results are apparent: but be carried out to its conclusion, and then adjudged according to its merits. Nor should one experiment cause us either to adopt or abandon any theory we may have taken up. The season, the time of commencing, the soil, and various other causes, may make a considerable difference in the result of different years. Three years at least should be allotted to each experiment before a final adjudication as to its merits should take place, and it be acted on. Nor should we abandon an experiment because it does not succeed on one kind of soil. What may prove a failure on sandy land, may succeed admirably on one of a clayey texture, and *vice versa*. No experiment should be undertaken until well digested, but when undertaken, should be persevered in, until the precise result is satisfactorily ascertained. We need scarcely say that all of these experiments should be recorded and the records carefully preserved.

But, with the greatest industry and perseverance, a planter can make but comparatively few experiments in the course of his life, whilst in every department, so much remains yet to be ascertained and settled. In many, we are compelled to follow the tracks pursued by our ancestors, without knowing whether they are correct or not, and whether a small variation would not produce more happy results. Hence arises the necessity of a more united action among the agriculturists, and hence, the benefit which arises from giving publicity to all experiments made. In former years, did a planter make a discovery, or an experiment which he thought might be useful to his brother planters, or wish to communicate his practice, (and in which he may have been eminently successful,) he was obliged to publish it at his own cost in pamphlet form, or insert it in the papers of the day, crowded among political and other news, and where it was seldom noticed, and could never be referred to, unless taken care of at the moment. This was discouraging, and consequently, but few agricultural communications were ever made. How different is the state of affairs now, both in Europe and in America, but more especially in the latter. In the United States, there are no less than eleven or twelve journals devoted almost exclusively to Agriculture and Horticulture, and numbers of others of a miscellaneous character, in which these subjects regularly occupy a conspicuous place.

The Agriculturist and Horticulturist, will not therefore, hereafter, have any excuse for their ignorance, for in these journals are collected, the opinions, the experiments, the practices and experience of many of our most valued and experienced planters, and in these journals the young, have a fund of information, to commence with, which those of the present day had not, and they consequently will start with advantages almost incalculable, they will commence at that point where the experience of the present day terminates, and which but for these journals, would have yet remained in obscurity.

But are not those who now occupy the field, and those who are to succeed, bound to continue a practice, by which so much good has already resulted, and which bids fair to be productive of so much more? We hesitate not in saying they are. Sheer justice would require it of them. Have they not received much from the rich stores of experience of others, and shall they profit by it, and not in return add somewhat to the fund from which they have benefitted so freely and so much? But this would not be all, for in so doing, they would not only be contributing their share, but setting a praiseworthy example to others, which if followed generally, would be productive of the happiest results.

And now planters of the South we turn to you. Have you no experiments to make, no experience to communicate? The whole world is in motion, and the march is onward. Will you be content to slumber on in inactivity, to pursue the old and beaten course because your fathers did so before you? Will you remain in ignorance whilst the rest of the world are becoming enlightened, or at most remain stationary, whilst they advance? Surely not. Investigate then for yourself, and communicate the result of your investigations. There are peculiarities in the climate, soil, and crops of the South, that require this of you, and will amply repay all your trouble and your care. The theories, and experiments of the phisiologists of more Northern regions, will aid you in your pursuits; but still there is much which is yet obscure, in that which is common to both climes. The field is yet open for research, and more especially does the South claim your attention. Science has as yet scarcely deigned to cast her eyes on this region of the world, to investigate the peculiarities of our climate, and the action which is exerted by it on all the various operations of husbandry. Be this then your care, and your field of labour.

But let not the plain and honest farmer who makes no pretence to scientific acquirements, think that he has nought to do—he may and can aid most materially in improving the agriculture of his native State, let him make his experiments, let him record them carefully, and communicate them, together with his opinions and experience, for the benefit of all. And thus, whilst those whose acquirements, enable them to enter into scientific research, and to point out the laws of nature which govern, he will, by his experiments, either confirm or confute the theories laid down, and thus by producing a more correct knowledge, enable those in search of truth to draw juster inferences, and proceed in their agricultural pursuits with a more correct knowledge of what ought to be done and what avoided.

And now, Readers of the Agriculturist, farewell:—our task is done, and we now retire from a pursuit which has always afforded us pleasure, and again sink back to our former privacy. To the Agriculturists of the South, we feel under peculiar obligations, for the kind support and indulgence they have extended towards us, and we hope ever to remember them with gratitude. Years will roll on, and we shall soon be forgotten by most of you, but often shall we recur to these years, with feelings of unmingled pleasure, and our only regret will be that our connexion has been so short.

And now, once more, we bid you a long, a last *farewell*. JOHN D. LEGARE.

Charleston, December 1st, 1834.

Imstinct of Plants.—Dr. Hancock says, if a vessel of water is placed within six inches of a cucumber vine, that in 24 hours time, the vine will alter the direction of its branches, and not stop till it comes in contact with the water. And if a pole is placed at a considerable distance from an unsupported vine, the branches of which are proceeding in a contrary direction from that towards the pole, the vine will in a short time alter its course, and not stop till it clings round the pole. But the same vine will carefully avoid attaching itself to low vegetables nearer to it, as the cabbage, &c. Dr. Darwin gives several instances of the instinct of plants.

THE BREEDER & MANAGER.

[The following is the conclusion of the chapter we published last week, on feeding or foddering neat cattle. It was accidentally omitted by the printer. We shall give other chapters of the same excellent book hereafter.]

[From the Farmer's and Grazier's Guide.]

NEAT CATTLE.—*Of Water.*

Improper feeding is as we have endeavoured to shew, injurious to neat cattle generally; but improper management, with respect to water, is productive of more serious consequences still; and is the chief origin of what is called among veterinary surgeons, *predisposition* to *disease*; in other words, the animal structure is, by mismanagement, rendered peculiarly liable to disease, and is then acted upon by the slightest cause.

Thus, a superabundance of water induces the quarter-ill, red-water, and scouring; while a smaller quantity than is proper, is often a main cause of inflammatory disorders.

Filthy or impure water should be avoided, as productive of the most serious consequences; it has been proved, beyond all doubt, that impure water given to pregnant cows is a more certain cause of abortion, or slipping of the calf, than any other, and also engenders bad udders, red-water, and scouring, and materially diminishes the quantity of the milk, and injures the quality of the butter and cheese.

Neat cattle, but particularly cows, should be watered twice a day, and in summer three times; this is the more necessary when they are kept on dry food: the water should be pure and transparent; the best of all is that which has been agitated by passing through a mill, as it is then softer, and more favourable to digestion. It is a dangerous prejudice, that muddy or stagnant water is not injurious; we have just given a decided opinion on this subject, and shall in the course of our observations give several cases to support that opinion.

It is always adviseable, when it can be conveniently accomplished, to pump the water intended for cattle-drink in troughs of stone or cement; the best ponds of water being liable to impurity from several causes; as one of these, it may be observed, that cattle invariably void their excrement either in the pond, or near it, immediately after drinking, and as there is generally a sloping bank to the pond, the dung must, in some degree, run down into the water, and by engendering various descriptions of the insect and vermin race, render it impure and unwholesome.

On a farm in Gloucestershire, three successive farmers were nearly ruined from the losses they sustained by their cattle dying, and for which they could give no reason, and of course could devise no remedy. The fourth occupant, however, a man of experience, finding in the first three years that all endeavours failed to secure him from the losses sustained by his predecessors, and thinking that possibly the water might be some cause of the evil, he fenced off his ponds, and pumped the water into troughs, to which he regularly drove his cattle to drink, morning, noon, and evening; in a short time they became healthy; no more deaths took place; and the quantity and quality of his butter and cheese were much improved.

At another place in the West of England, a piece of good grass was reserved for some cattle, they being at work on the adjoining land. They were attacked, soon after they had been turned in, with violent scouring. Supposing the grass might be the cause, they were put into another piece of pasture, where there was no water; on which account they were driven back to the former field, to drink, no suspicion being entertained that the water could in the remotest degree be the cause; it was a pond of spring water, and considered very wholesome. The scouring, however, increased, so much so, that they became much reduced both in flesh and strength, and at last voided blood with their excrement. It was now considered essential that the water should be carefully examined, and upon a closer investigation an immense number of different kinds of reptiles were discovered therein: a considerable quantity of lime was then thrown into the pond and stirred about, when an astonishing sight presented itself—myriads of reptiles were seen coming to the surface, and leaping about to escape from the almost-boiling water. After some time, the pond was cleared out, and two or three wheelbarrows full of various kinds of reptiles were taken out of it. The pond was again filled, and after a day or two, the cattle were put back again into the field, and soon recovered from their scouring.

The water of ponds surrounded with ash-trees is often during the summer covered with the cantharis or blistering fly, which the wind blows from the leaves of the trees. These insects when swallowed with the water are certainly poisonous. This is particularly the case in France, but not so much so in England; still, the same cause exists, though in a less degree, wherever ponds are overhung by banks of trees.

Water is rendered much softer, and produces more milk by being blanched, as it is termed; that is, by having a little bran or meal stirred into it; but water so prepared must not be kept too long, as it is apt to ferment and become sour. During the heat of summer, cows are very apt to become costive, particularly where they are kept principally on dry food; in this case it will be necessary to give them water in which bran and linseed have been boiled; and even if they are not costive it will be proper to add, occasionally, about a sixth part of a pint of vinegar to every pail of water, and especially so when the water is but of an indifferent quality, or when the weather is very hot and dry.

It is a fact, that when cattle have been accustomed to drink impure water, even the washing of a dung-heap, they will acquire a relish for it, and refuse good water, if offered to them: but the consequences arising from this practice, although not always immediate in their visible effects, are certain, and sap the very vitality of the animal's constitution.—We have stated that such a practice is a frequent cause of abortion, and productive of various and serious diseases: and we here repeat the caution, from a conviction that no other water should ever be given to cattle than what is pure, sweet, and wholesome; and that the use of that which is impure, although used for a time with apparent impunity, will not only inevitably produce present disease, but will lay the foundation of a train of disorders which will rarely if ever be eradicated.

From the London Lancet.

LECTURES ON VETERINARY MEDICINE, *Delivered in the University of London by Mr Youatt*—Lecture VII.—(*Concluded.*)

GLANDERS—ITS SYMPTOMS AND POST-MORTEM APPEARANCES.

Progress of the Nasal Discharge—Inflammation cannot long continue without producing some disorganization of structure or alteration of function in the affected part; and, the disease having existed for a greater or less length of time, the secretion from the nose is altered in quality as well as increased in quantity, and we have the peculiar viscidity of which all our writers speak, and which cannot be mistaken. The discharge is more pellucid than that of catarrh—it has seldom any offensive smell, it still continues to flow constantly on, and it has a singular stickiness, unpleasantly adhering to the finger, and sometimes in a manner glueing the nostrils together. This also continues for an indefinite period of time until the disease has committed greater ravages on the membrane which is its seat, and the discharge becomes purulent, bloody, fœtid. Ulceration has then taken place in the membrane of the cavity, or of some of the cells connected with it. The colour of the septum will now begin to change. It has usually been described as pale, or livid, or brown, in glanders. In the early stage of the disease, however, it has a decided, and sometimes intense, redness of hue. It indicates inflammation, and the degree of inflammation which exists. But when that inflammation has debilitated the membrane on which it existed, and the process of ulceration commences, it becomes pale, livid, leaden-colored, or brown.

Chancrous Ulceration of the Nostril—The ulceration once established, the disease hastens in its progress, and the sores begin to be visible on the lower part of the septum; they are sores of a peculiar character,—not mere abrasions—not stripes of excoriation as we sometimes see in nasal gleet—not the undefined ragged ulcerations, which are usually consequent on inflammation;—but the chancres,—distinct ulcers, with rounded, elevated, well-defined edges. You will observe their peculiar character in these preserved specimens, and more particularly in this, from the recent subject. You will particularly observe that they are found, not scattered here and there upon the septum, but in regular succession;—they follow the course of the vein which runs down towards the centre of the septum, and contiguous with which, and lying almost in contact with it, are the absorbents of the septum. I beg your particular attention to this, and with reference to another form, or perhaps stage, of glanders which I shall presently have to consider, namely, farcy—inflammation and ulceration of the superficial absorbents, and showing already the connexion between these maladies, or rather their identity.

They run down almost to the orifice of the ductus ad nasum. Let me once more caution you not to confound that orifice with one of these

chancrous ulcers, or to mistake it for the first appearance of ulceration on the lower part of the septum. Take care likewise that you do not mistake for ulcers, little spots of rather concrete mucus lying on the membrane. You would not be the only persons who have done so, somewhat to the compromise of their professional reputation. Always try whether you can rub off the suspicious spot with your finger.

These ulcerations sometimes spread over the greater part of the cavity. In these specimens you may trace them plainly on the æthmoid, and along the inferior edges of the turbinated bones; they occasionally produce, or are accompanied by, caries of these bones; they eat fairly into them, but the ulcers on the septum are in most cases superficial, and the perfect separation is still preserved between the diseased nostril and the sound one. When these chancres appear, the case is usually a lost one; but in a few instances, either by the power of medicine or of nature, these chancres take on a healthy character, and cicatrise and disappear. A fine specimen of this is now on the table. Ulcers have rarely long appeared in the nostrils before the constitution becomes affected; the coat stares; it has a peculiar pen-feathered appearance, scarcely ever seen in simple want of condition. There is a strange dryness and stiffness of the skin, and the hair comes off with the slightest touch; the belly is tucked up to an extraordinary degree, and the strength rapidly declines; there is cough, difficult and painful; the inflammation or ulceration has then travelled down the larynx and trachea, and the lungs are evidently affected; the breathing becomes difficult from another cause; the lining membrane of the nose is thickened by these inflammatory and ulcerative processes; the air-passage is obstructed and almost closed, and each act of respiration is accompanied by a hoarse roaring sound: there is a peculiar tenderness about the forehead; the membrane lining the frontal sinuses is inflamed or ulcerated; the integument of the forehead becomes thickened, and gives an appearance of swelling; the whole head, and face, and muzzle particularly, swell. Farcy now is superadded to glanders, or glanders has degenerated into farcy; or rather, perhaps, more of the absorbents are involved, and little tumours appear about the muzzle, and face, and neck, following the course of the veins (for these point out the direction of the absorbents,) and the tumours rapidly ulcerate. Tumours, still pursuing the path of the absorbents, now appear on the inside of the thighs, and they are connected together by a corded substance; this is the inflamed and enlarged lymphatic; and ulceration, rapidly spreading, soon follows the appearance of these buds. The deeper-seated absorbents are now affected; one or both of the hind legs swell tremendously, and become stiff, hot and tender. The loss of flesh and strength can now be marked every day; the membrane of the nose becomes of a dirty-livid colour; the membrane of the mouth is strangely pallid; the conjunctiva is infiltrated with a yellow fluid, like a sheep with the rot; the discharge from the nose becomes more profuse and insufferably offensive; the animal presents one mass of putrefaction, and at length dies exhausted.

Enlargement of the Submaxillary Glands—I have been delineating the usual succession of symptoms when ulceration has once appeared in the nostril; but, long ere that, possibly many a month before, there is another symptom whence the disease took its name,—enlargement of the submaxillary glands. A portion of the fluid secreted from the membrane of the nose, altered in character by the peculiar inflammation there existing, is reabsorbed; and, as it is conveyed along the lymphatics, some of it passes through the glands, which thus become inflamed and enlarged: in fact they sympathise with every inflammatory affection of the lining membrane of the nose; the horse can scarcely bear the slightest cold without the glands beneath the jaw becoming swollen and tender, and, sometimes, proceeding to suppuration. There is, however, a peculiarity accompanying the inflammation which they take on from the absorption of the virus of glanders; they are rarely large, except at first; still more rarely very hot or tender; but they are characterised by a singular hardness, by their proximity to the jaw-bone, and by their apparent and often actual adhesion to it—the adhesion produced by the inflammatory action going forward in it, and the effusion of coagulable lymph. This hardness and adhesion accompanying discharge from the nostril, and being on the same side as the nostril whence the discharge proceeds, affords proof, not to be controverted, that the animal is glandered. This is a general and decisive symptom, but not an invariable one. We are not justified in pronouncing a horse with slight discharge from the nostril to be safe, because the glands are neither adherent nor much enlarged. We must not forget Mr. Turner's case, in which, although the tumefied gland was on the same side as the discharge, and the disease had existed at least eight months, it was not larger than a kidney-bean, and had not the slightest tenderness or adhesion. I have seen cases in which the distinct gland was not larger than a pea, and others in which there was no enlargement of the glands, and only a thickening, and that a very slight one, of the surrounding cellular texture. Do not, therefore, fall into the common error about this. You may trust to the *adhesion* of the gland, but be not misled by its *looseness*, or even by its *absence* altogether. The widow of the proprietor of some of the Paddington coaches had a horse from one of whose nostrils there had, for a considerable time, been a slight aqueous discharge; there was a little thickening of the subintegumental cellular substance beneath the jaw, and a small loose knot, of the size of a pea, could be felt within it. No one, not even the veterinary attendant, suspected mischief; and it was not until one horse after another had become glandered, and six of them had died, that the true nature of the evil was apparent. Another lesson of caution, Gentlemen,—involving the question of glanders, and the examination with regard to glanders, in some difficulty, but still leaving sufficient to guide you if you will be patient and circumspect.

Diseases resembling Glanders—Strangles has sometimes been mistaken for glanders, but he must have been very inattentive who could have been guilty of such a blunder. Strangles is a disease of young horses; it is accompanied by fever, cough, sore throat, wheezing, enlargement—not of a single small gland, *but of the whole subjacent cellular texture between the jaws*, a phlegmonous tumour forming in it—forming in the *centre* of it—becoming prominent toward the middle, evidently containing a fluid, and at length bursting; and then the fever abating, and the thickening gradually subsiding and the horse doing well. Glanders can scarcely be confounded with common catarrh or sore-throat, or epidemic catarrh with enlargement of the glands of the throat. There is fever—that which is rarely or almost never seen in glanders, loss of appetite, inability to swallow, *profuse* discharge, *mucous*, *purulent*, *irregular*, the gland tender, and hot and moveable. With proper treatment the fever abates, the cough disappears, the swellings subside, and the discharge from the nose gradually ceases.

The post-mortem appearances of glanders are our surest guides to that object at which I have been aiming in this long detail of symptoms—namely, the seat and character of the disease. The nostril is generally more or less blanched, but with spots or lines of inflammation of considerable intensity. Ulceration is almost invariably found, of a chancrous character, on the septum, and often on the æthmoid and turbinated bones. The ulcers evidently follow the course of the absorbents—sometimes almost confined to the course of the main vessel, or, if scattered over the membrane generally, thickest over the path of the lymphatic, and evidently radiating from that line to other parts. These specimens before you place this disposition of the chancrous in the clearest point of view. The æthmoid and turbinated bones are often filled with pus, and sometimes eaten through and carious; but in the majority of cases the ulceration is confined to the external membrane, although there may be pus within. In aggravated cases the disease extends through all the cells of the face and head.

In these specimens you trace its path down the larynx and trachea, and the ulcers still follow one line, that of the main trunks of the absorbents. In aggravated cases its course can often, but not always be traced on to the lungs. It produces inflammation in those organs, characterised in a few cases by congestion; in others by that peculiar consequence of congestion, hepatization:—the celluler texture of the lungs is obliterated, a portion of them becoming one uniform mass. Most frequently, however, when the lungs are affected at all, we find tubercles—miliary tubercles, minute granulated specks on the surface or in the parenchyma, and not accompanied by much inflammation. Here are specimens of this affection of the lungs in glanders. In a few cases we have larger tubercles which have softened and burst, and terminated in vomica.

The appearances of the lungs to which I would chiefly direct your attention, and as throwing great light on the primary seat of the disease, are these—viz. the occasional absence of any morbid affection of the lungs, even in the most aggravated cases of glanders, and the correspondence between the lung that may be affected, and the nostril whence the discharge proceeded.

A record of nineteen cases of discharge from the left nostril presents the following results:—In four, no affection of the lungs; in ten, conges-

tion, or hepatization, or other marks of inflammatory action in the left lung only—the right lung was perfectly sound; in two cases, both lungs were affected, but the left lung most so; and in three cases both were nearly equally affected. In eight cases of discharge from the right nostril, two presented no disease of the lungs; in four, the right lobe only was diseased; in one, both were affected, but the right lung most violently; and in one, both lungs were equally diseased. In ten aggravated cases there was discharge from both nostrils; the left lung only was diseased in one; and in the other nine; both presented nearly equal traces of inflammation. The lesions of the abdominal viscera, and of the brain and its membranes, seemed to be perfectly accidental.

We are now, I think, gentlemen, prepared to come to some satisfactory conclusion as to the primary seat and nature of glanders in our next lecture.

THE GARDENER.

From the Worcester Palladium.

CULTURE OF SILK.

The first knowledge we have of the growing of Silk, is derived from Chinese history. The silk worm was first known in that part of China anciently called Serica, where forests of the white mulberry tree grew spontaneously. Among the claims of antiquity put forth by that strange race of men, we find it mentioned that more than 700 years antecedent to the time of Abraham, they had directed their attention to the culture of silk. One of the Empresses of the Celestial Empire, with the aid of her retinue of women, introduced the silk worms into the apartments of the imperial palace, and supplied them with leaves from the mulberry tree. The cocoons thus produced were found to be much more valuable than those which were produced in the open air. The queen and her women wrought the silk which they cultivated into garments, which they embroidered and otherwise tastefully decorated. It soon became the common apparel for all the "aristocracy" of China. Subsequently it became an article of commerce with the western nations, where eventually it was grown and manufactured. The Greeks derived their first knowledge of silk from the military expedition of Alexander, and Aristotle called the attention of his countrymen to the importance of the subject at least three centuries and a half before the commencement of the christian era. The Saracens introduced it into Spain when they conquered that country; and as early as the middle of the twelfth century it had become a source of much wealth to the Spanish nation.

Italy is celebrated for its productions of silk; yet it was not introduced into that country until the 16th century. In other parts of Europe its progress was more slow. Since the introduction of the mulberry tree into France, near the close of the 16th century, the French, instead of paying many millions annually to other nations, make an estimated profit of more than $7,000,000, yearly on their silks.

In the colony of Virginia, considerable effort was made for the production of Silk. Mulberry trees, seeds, and worms were sent over and furnished gratuitously by the British government, and we find it recorded that Charles II. once stated to Governor Berkley that he had himself worn Virginia silk, and found it fully equal to that of other countries. In 1661, Charles II. offered a large premium of tobacco to whoever should excel in the culture of silk; and, three years afterwards, one gentleman claimed the premium for 70,000 trees which he then had growing.

In 1735 *eight pounds* of raw silk were exported from Georgia; and for many years considerable quantities were annually exported. In 1759 the colony of Georgia exported upwards of 10,000 pounds of raw silk, which brought two or three shillings a pound more than the silk of any European country.

It was introduced into Mansfield, Connecticut, in 1760. But the Revolution came on, and there was no longer a foreign market for the raw material, and the colonists were not skilled in its manufacture. The exigencies of the country required that every man should be a soldier, or devote his time to such agricultural pursuits alone as might be requisite to the sustenance of himself and family. The business was resumed immediately after the Revolution; and in 1789, two hundred pounds of raw silk were made in the single town of Mansfield. We have seen it stated somewhere, that *five tons* of raw silk are now introduced annually in the three counties of Windham, Tolland, and New London. Three fourths of the population of Mansfield are now engaged in the culture of silk—some families producing from 20 to 100 pounds yearly. We believe that the farmers of Connecticut consider it the most lucrative part of their business. A knowledge of the process of raising the trees and producing the cocoons is very easily acquired. On an average 100 pounds of leaves, will produce a pound and a half of raw silk. One full grown tree, in a healthy state, will furnish a hundred pounds of leaves in a season. In the silk growing towns of Connecticut, a farm having mulberry trees on it is considered to be worth at the rate of one dollar a tree more than it would be without them. That it would be a profitable branch of agriculture there has never been a doubt. The greatest objection to entering into the business, has ever been the want of suitable machinery with which to manufacture the raw material into marketable fabrics. This desideratum has been happily supplied by Messrs. Gay & Moseley, of Connecticut, who have invented and put in operation machinery which works with ease and facility, and produces a fabric that equals the best of imported silks.

Mr. Gay was in this town last week, for the purpose of inducing our citizens to establish here a silk manufactory. He is prepared to supply the requisite machinery, and give such instruction in its use as may be necessary to the successful prosecution of the art. He had with him some beautiful specimens of the production of his machinery from an establishment which has gone into successful operation at Providence, R. I.

We are anxious to see the culture and manufacture of silk extensively established in New-England, as it will not only tend to diminish the importations of foreign silks, which now amount to about $10,000,000 annually, but will give to the North a great staple like that of the cotton of the South, and furnish to our whole population a healthful and profitable employment: an employment admirably adapted to females and children.

That a branch of industry, so essential to the prosperity of Massachusetts, may be successfully established among us, we hope to see the subject brought before our Legislature, at an early day of its approaching session, that the patronage of the government may be applied in such a manner as shall promote every effort towards the attainment of success.

[From the Village Herald.]

Sir:—In your paper of yesterday, is an article, taken from Silliman's Journal for October, giving some account of a substitute for linen, said to have been recently discovered in Salem, Massachusetts, by a female, and to have been patented. I know some of the statements of the article to be correct, readily believing others of them, and am not without faith in the opinion of the writer, that the material is likely to become a staple and highly valued commodity of our country. The plant, from which the material is obtained, first attracted my attention on a farm upon Bush Creek in Harford county, Maryland, in the winter of 1824–5; and I was then told that a pelerine, made of the silky down, contained in the pod of the plant, had been presented to Mrs. Madison and much admired; and that, of a soft white hue at first, it afterwards became of a rich yellow color, and was still beautiful. Soon after the plant had been first observed by me I noticed some of it on hills in Ohio, near to the river of that name, and received information that young shoots of it were used by a few in the West as a substitute for asparagus; but imagine them to be a poor substitute, and that they can never be esteemed as an esculent. A lady in Kentucky told me that many years before that she had mixed the down from the pods with cotton, and having the mixture spun and wove, made into a waistcoat, which she sent as a present to a friend in Baltimore. It was stated at the same time that a like mixture had been spun and knit into sightly and exceedingly comfortable socks. In 1828 in a fallow field of Ezekiel Ferman, Esq. in Mason county, Kentucky, I saw the plant growing so thickly and luxuriantly over continuous acres, that one who did not know that the farmers there deem it a troublesome weed, might have taken it to be a cultivated crop. I then thought seriously of endeavouring to ascertain whether it might not be made extensively useful. In looking into books I found that its down was much used by the poor of Canada instead of feathers for beds. No other use of it, that I remember, was mentioned, or suggested. A slight incipient trial strengthened a notion which I had entertained, that it would make excellent and splendid paper. A few experiments were made with its sap, which resembles in consistency and color fresh cream. It cleanses the teeth well, but is too pungent to be used as a dentifrice. Perhaps it might act well in some instances in the place of cantharides. But of its chemical, or of its medical properties I am not competent to judge. Fresh fibres of the bark, corresponding with the parts of hemp and flax, that are used in manufactures, were tried slack and twisted with equal size of new hemp, similarly prepared, and thought

of the two to be the stronger. The experiment, however, was made by hand, and not with dead weights, by which greater precision, and of course more conclusive and satisfactory results, could have been attained. Threads and small cords of different sizes were made by hand from the fibres, and with strength united softness, flexibility, and a beautiful color or gloss; so that no doubt was left upon my mind that some fabrics of it would be superior to like articles of hemp, or flax; that in some respects it might take the place of silk; and that, if it could be readily disengaged in large quantities from the other parts of the plant, it would become a valuable material to the manufacturer and a profitable crop to the farmer. If, as is supposed at Lowell, it can be spun on machinery, perhaps it will compete in some particulars with cotton. Some, but very insufficient, experiments were made as to the proper time for saving the plant and for separating the fibre. Doctors Taliaferro & Donophan, whose minds, however, very naturally turned almost exclusively to the chemical and medicinal qualities of the plant, imagined that I intended to publish an account of it forthwith. But it was my design before doing that to have it fairly pressed into paper, twisted into cords and ropes, spun into threads and woven into cloth; and in doing so to learn something further about the proper method of managing it on farms and preparing it for the manufacturer.—Circumstances have hitherto prevented the design from being carried into effect, so that my countrywoman of Salem has got the start of me.

Swift having been charged with plagiarism from a foreigner—perhaps Rabelais—contended that the matter in dispute was original with him, as it was with the other; and that all, that could be properly said about it, was that the Frenchman had the advantage of having been born before him. The honored father of him, who writes these hasty remarks, undoubtedly discovered the rail-way and used it on a small scale more than thirty years ago, putting, however, instead of flanges on the wheels, curbs upon the rails, which plan answered his particular purpose best; but as he never patented, nor proclaimed, his invention, originality in the affair as certainly belongs also to some one else. In truth a contrivance for surmounting elevations, and which may be supposed to have suggested the present improved and extended rail-way, existed in England anterior to the date of my father's device, but, I am confident was unknown to him. These observations are intended to introduce and illustrate the declaration, that in claiming to have partially discovered six years ago the fitness of the plant, that has been alluded to, for various useful and beautiful manufactures, I have no intention to deny originality in the matter to the Salem discoverer, nor to lessen the merit of her labors. On the contrary I believe that she never heard of my humble experiments and opinions, cheerfully render her honor for her more efficient exertions, and hope they may prove serviceable to her country and the world, and creditable and lucrative to herself; and, if my letter shall produce any beneficial effects, one of them will be the promotion of her purposes.

The lady with whom I conversed upon the subject in Kentucky thought the fibres of the down too short to be spun alone, and that to fit them for being spun it was necessary to mix cotton with them. It is not stated in Silliman's Journal that the fancy articles, exhibited at the East, were made of the fibres of the bark; but passages of the communication induce me to think that they were, and I have supposed in the preceding remarks that such was the fact. One expression, however, in the Journal suggests a doubt upon the point, and leads me to add that, if the supposition be incorrect, experiments with those fibres ought in my judgment to be made without avoidable delay.

The little of the plant, that I have seen in this country, was scattered and meagre, and the greater part of the country, I think, is illy adapted to the growth of it. But though the citizens of all parts of the country cannot share the direct profits of the discovery, yet, if expectation in regard to it shall be realized, the consequential benefits of it to them will be such, that we are justified in making their public Journal a vehicle for communications on the subject. Besides it would be to impeach their patriotism, benevolence and magnanimity to suppose them unwilling to impart information, that may be useful, because their portion of the emolument cannot be equal to that of others. Parts of Maryland would grow the plant well; and the dry rich lands of the West near to our parallel of latitude would yield immense crops of it; but what climate is most favorable to it my information does not enable me to say. The botanical name of it I do not remember, and have not present access to books for the purpose of ascertaining, but its common name where I have heard it spoken of is cotton weed. I have expressed myself thus confidently, because, though the communication, to which this letter refers, does not name, nor describe the plant, from which the material, discovered in Salem, is obtained, yet the particulars, it states, are such as preclude doubt from my mind of its being the same plant, that was the subject of my own experiments.

Perhaps it ought to be mentioned that the down of Mrs. Madison's pelerine was unwrought.

Yours respectfully,

R. H. WINDER.

Somerset co. Md.
Nov. 26, 1834.

MISCELLANEOUS.

Woman's Kindness.—Mr. *Flexible Grummet*, M. P. who writes "Leaves from my Log Book," for the London United Service Journal, and whose narratives have the air of authenticity much more than his name, relates the following incident which occurred while he was passing through a small village near Rochefort, France, as a prisoner, under a military escort.

I had obtained a fresh supply of canvas for my feet, which were much blistered and extremely sore; but this was soon worn out, and I suffered dreadfully.—About noon we halted in the market-place of a small town bearing every mark of antiquity, (I think it was Melle,) to rest and refresh. To escape the sun I took my seat on an old tea-chest, standing in front of a huckster's shop, and removed my tattered moccasins. Whilst doing this, an elderly woman came out of the shop accompanied by a young girl, very prettily dressed, and "Pauvre garcon?"—"Pauvre prisonier?" were uttered by both. The girl, with tears in her eyes, looked at my lacerated feet, and then without saying a word returned to the house. In a few moments afterwards she re-appeared, but her finery had been taken off, and she carried a large bowl of warm water in her hands. In a moment the bowl was placed before me,—she motioned me to put in my feet, which I did, and down she went upon her knees and washed them in the most tender manner. Oh, what luxury was that half hour! The elder female brought me food, whilst the younger, having performed her office, wrapped up my feet in soft linen, and then fitted on a pair of her mother's shoes.

"Hail! woman hail! last formed in Eden's bowers,
'Midst humming streams and fragrance-breathing flowers:
Thou art, 'mid light and gloom, through good and ill,
Creation's glory, man's chief blessing still!—
Thou calm'st our thoughts, as halcyons calm the sea,
Sooth'st in distress when servile minions flee;
And oh! without thy sun-bright smiles below,
Life were a night and earth a waste of woe."

During the process above mentioned, numbers had collected around and stood silently witnessing so angelic an act of charity. "Eulalie" heeded them not; but when her task had been finished she raised her head, and a sweet smile of gratified pleasure beamed on her face.

Durable Ink—Mr. Brande gives the following as the best proportion of ingredients for durable ink; 8 oz. of galls, 4 oz. of logwood, boiled in 12 pints of water, till reduced to six by boiling; then add 4 oz. of sulphate of copper (blue vitriol) 2 oz. of sugar, and ¼ oz. of cloves. The best writing is liable to lose its color by long exposure to the air, or by the action of the acids or acid vapor, on which account Mr. Brande recommends that ink to be used in laboratories, for labels, or in certain manufactories where it is used, should have a stick of Indian ink dissolved in each pint.

Preservation of Seeds.—If seeds are intended to be sent a great distance or it is wished to preserve them a long time they should be wrapped in absorbent paper, and surrounded by moist brown sugar.

Chimneys.—Method of building Chimneys that will not smoke.—Contract the space immediately over the fire, so you may be sure of the air being well heated *there*; this will ensure a current upwards. All chimneys should be carefully built, and every joint well filled with mortar, so as to prevent communication in case of fire.

[*Dr. Thomas Cooper.*

CONTENTS OF THIS NUMBER.

Snapping fire wood—Notice of Mr. Legare's farewell address—Seasonable cautions—The reason why subscriptions are not paid discovered; enquiry about bone-dust Manure—Dahlia exhibition in London—Action of Tannin on the roots of plants—Potatoes cut and uncut for seed—Mr. Legare's Address—Instinct of plants—On watering neat Cattle—Glanders in horses—Silk Culture—Cotton Weed—Woman's kindness—Durable Ink—Preseration of seeds—Chimneys that will not smoke.

BALTIMORE PRODUCE MARKET.

☞ *These Prices are carefully corrected every* MONDAY.

	PER.	FROM	TO
BEANS, white field,	bushel.	——	3 00
CATTLE, on the hoof,	100lbs.	5 00	6 00
Slaughtered,	"	3 00	4 00
CORN, yellow,	bushel.	56	——
White,	"	56	——
COTTON, Virginia,	pound.	12	15
North Carolina,	"	14	16
Upland,	"	14	16
FEATHERS,	pound.	35	37
FLAXSEED,	bushel.	1 62	1 70
FLOUR—Best white wheat family,	barrel.	6 00	6 50
Do. do. baker's	"	5 50	6 00
Do. do. Superfine,	"	4 75	5 00
Super Howard street,	"	4 62	4 75
" " wagon price,	"	4 50	——
City Mills, extra,	"	4 87	5 00
Do.	"	4 75	4 87
Susquehanna,	"	5 25	——
Rye,	"	4 00	4 12
GRASS SEEDS, red Clover,	bushel.	5 50	6 00
Timothy (herds of the north)	"	3 00	3 50
Orchard,	"	3 00	3 50
Tall meadow Oat,	"	2 00	2 50
Herds, or red top,	"	1 25	——
HAY, in bulk,	ton.	16 00	——
HEMP, country, dew rotted,	pound.	6	7
" water rotted,	"	7	8
HOGS, on the hoof,	100lb.	5 00	——
Slaughtered,	"	5 50	——
HOPS—first sort,	pound.	15	——
second,	"	13	——
refuse,	"el.	11	——
LIME,	bush	30	33
MUSTARD SEED, Domestic,	"	5 00	6 00
OATS,	"	30	33
PEAS, red eye,	bushel.	60	——
Black eye,	"	80	85
Lady,	"	100	——
PLASTER PARIS, in the stone,	ton.	3 12	——
Ground,	barrel.	1 37	——
PALMA CHRISTA BEAN,	bushel.	1 50	1 56
RAGS,	pound.	3	4
RYE,	bushel.	60	63
TOBACCO, crop, common,	100 lbs	4 25	5 00
" brown and red,	"	5 00	7 00
" fine red,	"	7 00	9 00
" wrappery, suitable for segars,	"	6 00	12 00
" yellow and red,	"	8 00	12 00
" yellow,	"	13 00	17 00
" fine yellow,	"	15 00	25 00
Seconds, as in quality,	"	3 50	5 00
" ground leaf,	"	5 00	9 00
Virginia,	"	4 00	——
Rappahannock,	"	——	——
Kentucky,	"	4 00	9 00
WHEAT, white,	bushel.	1 03	1 09
Red,	"	90	95
WHISKEY, 1st pf. in bbls	gallon.	31	32
" in hhds	"	29	——
" wagon price,	"	27	28
WAGON FREIGHTS, to Pittsburgh,	100 lbs	——	1 25
To Wheeling,	"	——	1 50
		washed.	*unwash*
WOOL, Prime & Saxon Fleeces,	pound.	50 *to* 60	24 *to* 26
Full Merino,	"	44 50	22 24
Three fourths Merino,	"	37 44	22 24
One half do	"	33 37	22 24
Common & one fourth Meri.	"	30 33	20 22
Pulled,	"	31 33	22 24

BALTIMORE PROVISION MARKET.

	PER.	FROM.	TO.
APPLES,	barrel.	$3 00	$5 00
BACON, hams, new,	pound.	11	——
Shoulders,	"	8	9
Middlings,	"	——	——
BUTTER, printed, in lbs. & half lbs.	"	25	37
Roll,	"	15	25
CIDER,	barrel.	——	——
CALVES, three to six weeks old	each.	3 00	6 00
COWS, new milch,	"	17 00	30 00
Dry,	"	6 00	10 00
CORN MEAL, for family use,	100lbs.	1 50	——
CHOP RYE,	"	1 50	——
EGGS,	dozen.	19	20
FISH, Shad, salted,	barrel.	5 75	6 00
Herrings, salted, No. 1,	"	4 75	——
Mackerel, No. 1, 2 & 3,	"	5 00	7 00
Cod, salted,	cwt.	2 50	3 00
LAMBS, alive,	each.	1 25	2 00
Slaughtered,	quart'r	31	50
LARD,	pound.	8	9
ONIONS,	bushel.	62	75
POULTRY, Fowls,	dozen.	1 50	2 25
Ducks,	"	——	2 50
POTATOES, Irish,	bushel.	40	62
Sweet,	"	——	——
TURNIPS,	"	37	50
VEAL, fore quarters,	pound.	3½	4
Hind do.	"	6½	——

ADVERTISEMENTS

TO NURSERY MEN.

1630 Peach Stocks—One year old.
45 do. do.—two years old.
520 Fear do. two do. do.
740 Apple do. two do. do.
For sale cheap. Enquire at this Establishment.
Dec 9.

GRAPE VINES.

HERBEMONT'S Madeira, one, two, and three years old, from 25 cents to 75 each.
Isabella, two and three years old, at 25 to 50 cts each.
Catawba, one year old, 25 cts. each.
White Scuppernong, two years old, at 37½ cents each.
Sultana, one year old, at 50 cts. each.
Woodson, two years old, at 37½ cents each.
Red Bland, one year old, at 25 cts. each.
Are for sale at this establishment, and will be well packed to go any distance. no. 25

GAMA GRASS SEED

JUST received, and for sale at this Establishment—Price 50 cents per ounce.

PEA FOWLS.

ONE pair 2 years old, and one pair 3 years old, for sale at this establishment. Price $3 a pair. no 4

MORUS MULTICAULIS.

THE subscriber has on hand a few hundred of this celebrated Tree, unrivalled in the quality of its leaves as food for the silk worm, for which he is ready to receive orders (accompanied by the cash) with *particular* directions for the delivery of the trees on or after the first of Nov. next. Price 50 cents each, $5 per dozen, or $40 per hundred.

The success and ease with which this tree is propagated, the extraordinary quickness of its growth, the superiority of its leaves over *all* others for the silk culture, and its uncommon luxuriance and beauty, altogether recommend it to the favourable notice of *every farmer* as a most valuable acquisition. I. I. HITCHCOCK,
aug. 26 Amer. Far. Estab.

BULBOUS ROOTS.

HYACINTHS, Tulips and a general assortment of Bulbous Roots, suitable for the present season, for sale low at this establishment by
Oct. 28. I. I. HITCHCOCK.

BAKEWELL RAMS.

TWO Bakewell Rams of good size and quality, for sale by a farmer near Baltimore at $20 each. Apply to I. I. HITCHCOCK,

WESTPHALIA GEESE.

A FEW pairs of these very superior Geese are now ready for delivery at 5 dollars a pair. Apply to I. I. HITCHCOCK,
no 18 Amer. Far. Estab.

WHITE TURKIES.

I HAVE now ready for sale, several pairs of these truly beautiful fowls, at $5 a pair, they are of this year's crop. I. I. HITCHCOCK,
no 18 American Farmer Establishment.

FRUIT TREES—CHEAP.

An Invoice of fruit trees from a first rate nursery, having been missent, is offered by the owner for sale a at reduced amount. The opportunity is a favorable one for procurring a lot of first rate trees, at a great bargain. The following is a list of the trees which are laid in the ground by the heels so as to continue unhurt till next spring if necessary.

APPLES.

2 Monstrous Pippin.
2 Flushing or Esopus Spitzenburgh.
2 Royal Pearmain.
2 Long Island Russet.
2 Winter Pearmain.
2 Alexander—a new Russian apple, very large and of great celebrity.
2 Rhode Island Greening.
2 Pomme d'appi, or Lady apple.
2 Carthouse.
2 Newtown Spitzenburgh.
2 Bellflower.
2 Vandevere.
2 Red sweet Vandevere.
2 Michael Henry Pippin.
1 Winesap.
1 Rambo or Romanite.
1 Large Yellow Newtown Pippin.
6 York Greening.
7 Red Streak.

PEACHES.

1 Teton de Venus.
4 Malcaton.
1 Lehman's cling.
2 Gough's Cling.
3 Oblong open Peach.
1 Fine Cling.
2 Early Etna.
4 Budded trees that have lost their labels.

PEARS.

2 Jagonelle.
1 Portugal.
1 Summer bergamot.
1 Ambert.
1 Butter.
1 Seckel.
2 St. Germaine.

PLUMS.

1 Peters' large Yellow Gage.
1 French do. do.
1 Gage.
1 Egg.
1 Imperial.
1 Bolmar's Washington.
1 Blue Damascene.

CHERRIES.

2 Morrello
1 Orleans.
2 May Duke.

QUINCES.

1 Portugal
1 Orange.

The Invoice including packing mats, &c amounts to $30, and the whole will be sold for $20, which may be sent to I. I. HITCHCOCK.
Amer. Farm. Estab.

AGENCY FOR TREES, &c.

THE subscriber respectfully offers his services to his customers and the public generally, as agent for the procurement of Fruit and other Trees. It may not be generally understood or duly considered, that few nurseries contain *all* kinds of trees in equal perfection. One, for instance, is celebrated for its fine apple trees, another for its peaches, and a third for its plums or pears, while scarce any of them can make up a collection of *all kinds* of trees of the best quality. In this respect the subscriber flatters himself that he possesses peculiar advantages. His own nursery is not extensive or forward enough to afford many trees for sale yet, and his acquaintance with nearly all the most eminent nurserymen in this country, and of the peculiar excellencies of their respective establishments enables him to select from them all, probably a better collection of fruit trees than any one of them can furnish. Trees ordered from any particular nursery, or to be selected by me, will be charged at nursery prices and 10 per cent commission added. Orders ought to be forwarded immediately, and all confided to the subscriber's agency shall receive his best attention.

I. I. HITCHCOCK,

THE FARMER & GARDENER;

AND LIVE-STOCK BREEDER & MANAGER.

CONDUCTED BY I. IRVINE HITCHCOCK, AND ISSUED EVERY TUESDAY FROM THE AMERICAN FARMER ESTABLISHMENT, AT $5 PER ANNUM, IN ADVANCE

No. 35. **BALTIMORE, DECEMBER 30, 1834.** **Vol. I**

☞This publication is the *successor* of the late
AMERICAN FARMER,
(which is discontinued,) and is published at the same office, at five dollars per year, payable in advance.
☞When this is done, 50 cents worth of any kind of seeds on hand will be delivered or sent to the order of the subscriber with his receipt.

American Farmer Establishment.

BALTIMORE: TUESDAY, DECEMBER 30, 1834.

NEW HORTICULTURAL PERIODICAL.

We have received from our friend *Fessenden*, the veteran author and editor of numerous useful works in aid of the great cause of making "two blades of grass grow where but one grew before," the following prospectus, which we most heartily recommend to the attention of all lovers of gardening, either plain or ornamental. The multiplication and cheapening of such works may indeed bear hard on the interests of individuals (and we *feel* what we say) but cannot be otherwise than beneficial to the public, which circumstance is, or ought to be paramount with every real patriot.

PROSPECTUS of the *Horticultural Register and Gardener's Magazine*, to be conducted by Th. G. Fessenden, aided by several scientific and practical Horticulturists—*with Embellishments.*

There is a very considerable extent of meaning to the word Horticulture,—and in our modern definition we have included the branches of Gardening, of Orcharding and the cultivation of Flowers; it will, therefore, be obvious, that the title of the work proposed embraces arts of culture of great and increasing importance. The study of *Botany* has recently been made a part of the education of children, and its advantages and pleasures will ensure it increasing attention. As an assistance to acquiring the taste for, and increasing the attention to, this delightful study, the work proposed will be of much advantage. It will be conducted after the manner of the London Horticultural Register, and of Loudon's Magazine. The department of Horticulture, embracing more particularly that of Fruits, will be aided by a gentleman of eminent knowledge and correctness as to their nomenclature; and that of Vegetable Gardening, will be conducted by the Editor. That of Floriculture by a professional Florist.

Orders are out for all the important Foreign Periodicals, and from these will be made selections of all new and important articles, with descriptions of new Fruits and Flowers which may be brought into notice.

The work will be published monthly, on fine paper, octavo size, and contain forty pages each month, with a neat cover, and afforded at the low price of *Two Dollars* per annum. If sufficient encouragement be given, the work, after the first volume, will be increased, and expensive drawings introduced.

Subscription papers are left with the following gentlemen (besides many others in New England and New York):—Wm. M. Morrison, Alexandria, D. C.; I. I. Hitchcock, Baltimore; D. & C. Landreth, 85 Chestnut street, Philadelphia; S. C. Parkhurst, Cincinnati, Ohio.

IMPROVING FLOUR BY A MIXTURE OF CORN MEAL.—It is asserted on respectable authority, that by adding about two quarts of good sound Indian Corn to each bushel of wheat before grinding, the quality of the bread made from the flour is very much improved—TRY IT.

PUMPKIN PIE SEED.—Extract of a letter from an *eastern* correspondent:

"You enquire for pumpkin seed of the best kinds known in this country—I can send you seed that will produce thanksgiving pumpkin pies *ready made*—how much will you have of it?"

Really we are at a loss how much to order of this seed. At all events we will have a little and sell it at the usual price, and if it produce as is promised, we shall expect from each purchaser a small return of the pies produced by way of proof, and as an "extra allowance" for the superiority of the seed.

BALTIMORE YOUNG MEN'S PAPER.—One of the pleasing signs of these our times, is the establishment of numerous associations in various parts of our country, for self and mutual improvement, under the various titles of Lyceums, debating societies, &c. &c. Among the associations of this kind in Baltimore, is one entitled the "Baltimore Young Men's Society," whose object is mental improvement, and among other means for promoting it a weekly paper has been established under the title of "the Baltimore Young Men's Paper." Besides the intrinsic merit of the contents of this paper, which is made up of original articles, by the members of the society, the purpose of this periodical entitles it, in our opinion, to the favor of all the friends of mental improvement, especially the "Young Men" of our country, and of Maryland in particular. The work has many recommendations—it is well filled and well printed, and costs only $2 50 a year. We shall take pleasure in handing in names which may be sent us for the purpose of patronizing the work.

FRUITS AND VEGETABLES.

To the Editor of the Farmer and Gardener:

It is gratifying to observe the attention which has of late years, been bestowed upon the acquisition, and cultivation of new and useful varieties of fruit and vegetables; this is no doubt mainly attributable to the praiseworthy zeal of the various Horticultural Societies, in the United States, as well as the liberality of many private individuals, who have made it their object, to procure and disseminate many rare and useful plants and trees. In the course of a few years, we may expect to see all but the best varieties of fruit discarded from the garden and orchard, and the cultivator directing his whole attention to those kinds, which, by their qualities will amply repay his attention with valuable crops. But notwithstanding the great number of fruits of rare and good qualities, which exist in the extensive collections in this country, many of the best varieties are degenerating year after year.

In some parts of Europe, a great deal of attention has lately been bestowed upon the production of natural fruit from seed, and a number of valuable kinds have been thus originated, particularly in Belgium, where it is said they select the most unthrifty looking seedlings, covered with thorns or spines, in preference to the usual practice of choosing those which possess large wood, fewer thorns, and bearing the marks of high cultivation—How are these theories borne out by the practice in this country?

Of late, a number of new varieties of fine pears, peaches, and plums, have been produced from seed, both in Europe and this country, though the production of new varieties of the apple appear to be less frequent. How is this? are stone fruits more apt to retain a similitude to their original excellence than those of seed fruits, such as the apple, &c. It is well known, that the peach very frequently produces good natural fruit without the intervention of grafting, or budding, though it may not resemble that of the original tree—as a matter of profitable amusement, unconnected with any other consideration, there is a pleasure after having bestowed a long period of care and attention upon a tree or plant, in finding at the end, your labours rewarded with a new, and perhaps, valuable variety of fruit.

What are the chances of grapes producing fruit from the seed? Some vines raised from the seed of the large white imported malaga grape, and which will be three years old next Spring, are already upwards of two inches in circumference—they made some shoots last season, which were estimated to be fully 30 feet in length, and appear to be equally as vigorous in their growth as the Isabella.

Will you or any of your intelligent correspondents give a subscriber some information on the above matters. M.

Baltimore, 19th Dec. 1834.

THE FARMER.

Produce of 36½ acres.

The following article from the Cultivator is interesting, and the more so because the author of the "memoranda" takes the right way to be useful to others in his notes, by giving his *errors* as well as his successful management. We recommend a similar course to all reporters of their experiments in cultivation.

"I send you, Messrs. Editors, a memorandum of the produce of thirty-six and a half acres of land, the past season, in grain and grass, not on account of any thing worthy of notice in the result, but that others may profit by my *errors* as well as by my wisdom. The soil is a sandy loam, and no part received but one ploughing for a crop.

17	acres produced	-	53	tons of hay
4	" "	-	74	bushels rye
1	acre "	-	2	" wheat
1½	acres "	-	574	" ruta baga
4	" "	-	776	" potatoes
5	" "	-	360	" sound corn*
4	" "	-	87	" barley

36½ acres.

Remarks on the culture:

Hay—The crop was impaired by the frost of last winter having killed much of the clover, particularly on about three acres laid down last year. Two acres were in a reclaimed swamp, which were cropped with potatoes in 1833. The wet spring not permitting the ground to be ploughed in due time, and the grass which sprung up spontaneously, promising something of a crop, it was suffered to remain. The product was but *so so*. Three and a half acres were a ley of four or five years, which ought to have been broken up before; as grass, with me, generally diminishes after the third year. The residue bore a heavy crop, and averaged, by estimation, three tons an acre.

Rye—As it is my maxim to sow this grain either very early or very late, I was obliged to sow late, in consequence of the ground having been encumbered with a potatoe crop. The product was a fair crop, though I think that if three or four pecks more of seed had been sown on the acre, there would have been a corresponding increase in the product. The grain was good, but thin, the late sown not tillering like that which is sown early.

Barley—One half of the barley ground was over-manured, and the grain was prostrated before it got into blossom. The product of this part was of course trifling. It should have had no manure, as it followed a crop of ruta baga well dunged. Besides, it does not answer to have barley-ground too rich, or to apply to this crop long manure.

Wheat—This was sown in February, on ground ploughed in the fall. It promised tolerably well, until it was attacked by the wheat insect, which virtually destroyed the crop. Scarcely a head contained more than three or four kernels, and in some cells, while the grain was standing, I found five and six insects.

Ruta Baga—This was the poorest crop I ever raised of the kind, and the failure is not attributable to any error of mine, but to the dry summer. It was sown upon an old grass ley, previously pastured, and dunged, ploughed and harrowed just previous to drilling in the seed. The soil was very dry when worked, and there was not sufficient rain afterwards to bring on a decomposition of either the manure or the sod. Comparatively but few of the seeds grew, and the rows were not half filled with plants. In a favorable season the product would have been more than double.

Potatoes.—Two acres were on a grass ley, well dunged with long manure, and gave a good crop for the season, of more than 300 bushels the acre. This crop received two ordinary dressings, but after harvest I caused all the weeds to be pulled up, and carried to my cow-yard, which, I am confident, added very greatly to the potatoe crop. One acre was planted on ground habitually wet, and which had been underdrained late the preceding fall. The ground was but imperfectly ploughed, the crop was badly tended, and the product was hardly worth gathering, even in this season of scarcity. The fourth acre was principally on ground where barley had been seriously injured by the frost of the 15th May; it was planted late with refuse seed. The ground was very dry, and from late planting, bad seed, and a very dry season, the product did not exceed 100 bushels. My practice is not to earth potatoes after the tubers have begun to form, as earthing them is apt to cause a new set of stolens to start near the surface, which rob the elder ones of their food, and produce potatoes only of a diminutive size. Yet weeds ought to be carefully extirpated, as they not only impoverish the soil, but shade the ground, to the great prejudice of the crop. The labor of extirpating weeds is amply repaid in the increased product. I think I am warranted in saying, that a clover ley, and long manure, the latter well spread and ploughed under, are admirably adapted both to the corn and potatoe crop.

Corn—This and the unproductive acre of potatoes, were grown in a field abounding in springs, and heretofore habitually wet, but which was underdrained the preceding autumn. A part of the ground had been in pasture, and a part under tillage, and the whole was well manured. The hills were planted three by two and a half feet apart, and there remained after the first dressing, four spears in almost every hill. The corn was dressed with the harrow and cultivator, and twice hoed, though but very slightly hilled. Four-fifths gave an uncommon fair crop. Sixty-three selected ears gave a half bushel of shelled grain, averaging more than half a pint each. The other fifth was killed by kindness, or rather from want of personal attention. Having two loads of horn shavings and crushed bones, I directed them to be spread on *two* acres; but my men, being unacquainted with these materials, and not appreciating their strength as a manure, thought to do me a kindness, and applied the whole to *one* acre. The consequence was, the stalks were too luxuriant and tender, and the wind prostrated them flat to the ground ere the grain was half grown, and but very little of the corn was fit for the crib.

At present prices, the products I have enumerated are worth about $1,300, and average about $36 to the acre.

The errors in my practice, against which I would guard the reader, are—

1. In sparing grass lands from the plough after the cultivated grasses have mostly run out, and after the product has materially diminished.
2. In sowing *late* rye too thin.
3. Applying manure to a barley crop, the soil of which was already rich enough—particularly long manure.
4. In planting potatoes too late, and with bad seed.
5. In the excessive and wasteful application of bone and horn manure. And finally,
6. In not superintending personally ALL the operations of the farm. We may hire men to *work*; but it is difficult, as my friend Delevan observes, to hire men to *think correctly*.

By way of postscript I will remark, that I had made, in 1833, in the six acre field in which I grew my corn, about 200 rods of brush and straw underdrains, which cost me about $20, and that I think I am fully remunerated for this outlay in the *increased* product of the field in the past season. ——— B. J."

[From the National Intelligencer.]

The system of cultivation spoken of in the following notice, exhibits to the farmer a most cheering prospect. In the immediate vicinity, the ground though poor, and at present unproductive, is well adapted to clover, and, under the system pursued with such wonderful success by Mr. Semmes, might be brought to yield, if not crops as large as his, yet sufficient to be profitable.—Very little additional labor would be required; and now as the spirit of improvement is abroad, and knowledge is shedding down her increased lights upon the various branches of the arts and sciences, I know not why that venerable and primeval art of agriculture should be suffered to remain unimproved, and so little attention paid to its advancement. The farmer is too apt to look to old rules, and imagine that they are as substantial and everlasting as the land upon which they are to operate. He is constantly allowing himself to lose his investments, and all arising from a want of zeal in that profession which is his support, which is so highly honorable, and so well adapted to the social and domestic happiness of life.

It is by such scraps of information collected at random by intelligent gentlemen, as that which I have given below, that any light at all comes dimly and distantly through the heavy shade in which the farmer rests, secure in short crops, and contented with growling at the low prices of produce; but these experiments of the industrious, brought to perfection and reduced to practice, are, in truth, of inestimable value to the man who earns his bread by the sweat of his brow, and the toil of his limbs.

I have added these few remarks, Mr. Editor, in order that agriculture may have an advocate here; and that the honest and industrious cultivator of the earth may stumble, at least for once in his life while raking among his straw, *upon a truth*.

I am, gentlemen, yours, &c.

PLOUGH HANDLE.

* My *soft* corn and small potatoes and some pumpkins, have fattened about 2,500 lbs. of pork, *finished*, during the last ten days, with *hasty pudding*.

TO THE FARMERS.

Extract from the Journal of a Gentleman who travelled for Agricultural information.

Nov. 1st, 1834.—Visited Mr. John Semmes, of St. Mary's county, Maryland, who informs us that his great crop of corn averaged upwards of twenty-five barrels the acre. Respectable judges of the county were appointed to ascertain the quantity of corn; and, after having accurately surveyed one acre, the corn was gathered and measured. First, a barrel being shelled to ascertain the accuracy of the barrel, eighteen or twenty of the respectable gentlemen of the county and of the adjoining county were present, saw the land measured, saw the corn measured, and are ready at any time to testify the fact, that the average acre, measured in their presence, amounted to twenty-five barrels and some pecks per acre.—This farm is situated on the Patuxent river, fifteen miles below the "Cool Springs," or Charlotte Hall, and adjoining the farm on which Cole's Tobacco Inspection is—and the third from the Queen Tree. The farm is uncommonly hilly.

Process.—He prepares his ground by clover, the ground laid off from five by two and a half to three feet. The corn then dropped, three grains in the check, followed by persons who drop on the corn, or even if they are in advance of the corn-droppers, a handful of two-thirds slacked ashes and one-third plaster, mixed before it is dropped. Should the corn not come up regularly, he drops one or two seeds more, as may be necessary. He gathers his seed corn from the field before gathering the crop, so as to have a choice of ears. He plants from the 1st to the 10th of April, and ploughs four inches deep.

[From the Genesee Farmer.]

Notices of the Italian Rye-Grass.

I sowed last spring a small quantity of the seed of this grass, which had been given me by Judge Buel. It readily germinated; but, during the long and severe drought of summer, the grass was not rank in its growth, being not only injured by drought, but also annoyed by the large white worm having a brown head. In the soil where it grew, these worms abounded. Several of the roots, however, sent up seed stems, and perhaps if I had watched my opportunity, I might have saved seed. After the rains began to fall, and autumn came on, the grass assumed a more thrifty aspect. It is now perfectly healthy, rank, and thick set. Its adaptation to our soil and climate, and to the uses of our husbandry, will be better known, after the experiments of another year.

DAN BRADLEY.

Marcellus, Nov., 1834.

[From the Same.]

Query to Farmers.

Winter has come, and what provision have you made for passing the long evenings of the four ensuing months pleasurably and profitably to yourself and others? The farmer who thinks it will do now, as formerly, to sit by the fire and drink cider, and tell stories through the winter, has not kept pace with the spirit of the times; he is lamentably behind the spirit of the age in which we live. There has, it is evident, a certain class of individuals grown up in our land, who speak of and treat the cultivators of the soil as an inferior caste, men who cannot understand the leading topics of the day, whose utmost abilities are confined to the merit of being able to discuss a boiled potatoe and a rasher of bacon, and who ought not to be entrusted with legislating for themselves, much less for others. If as a body the farmers are obnoxious to this reproach, we surely should lose no time in correcting the evil—if as is believed, these aspersions are calumnious, they must be lived down. The farmer has no excuse for ignorance. Information on all the useful and necessary subjects which come before us as men, and citizens, is presented in shapes so easily accessible, that he who remains ignorant deserves to be a reproach and a by-word. Let no one think then that he is prepared for winter, who has not made arrangements for a liberal supply of food for the mind as well as the body. Well conducted papers, able periodicals, and valuable books must be procured, and they must be read and studied. Universal education is our boast, but it is foolish and vain-glorious, unless it is turned to useful purposes. Every farmer should be a practical utilitarian; "Cui bono," should be his motto; every day should witness some profitable acquisition of knowledge. A few dollars a year paid out for well selected and standard works will in the course of a few passing years provide a farmer with a valuable liberary. The farmer who has a family is inflicting on them a cruel and irreparable wrong if he by his negligence or his parsimony deprives them of such a resource.—The young cannot be idle, and their time if not profitably employed, will be perhaps worse than thrown away.

W. G.

[From the Same.]

An Easy method to prevent wheat turning to chess—my own experience for example.

About fifteen years ago I purchased a small farm where I now reside. It had been managed in the manner usually practiced by those who have to encounter the difficulties of reclaiming a wilderness, of making the most on every foot of cleared ground; consequently through repeated cropping, added to a considerable share of carelessness, my fields were overgrown with cheat and cockel, insomuch that my first crops were with difficulty made merchantable. I found it necessary to improve the course of farming; and *believing* (and that is an important item in the concern, as the farmer who believes in transmutation will naturally be careless in regard to seed, &c.) that wheat *would not* degenerate into a spurious plant, I procured a fan with a cockle sieve attached to the shoe, of such size as to pass all the chess; and if that did not clean it effectually, finished with a hand sieve, and made it a point to sow none with my wheat. The consequence of this was that the chess gradually disappeared; and I believe that for some years past, I have not grown as much in a crop (generally about twenty acres) as had previously grown in some of my fields on a single rod, while the advocates of transmutation around me generally have it in abundance. I have found it more difficult to overcome cockle when once seated in the ground, and do not know that any one pretends to believe that wheat will change to cockle.

Flushing, Ohio. OHIO FARMER.

Time of Germinating.—Some seeds, such as those of the coffee plant, require to be sown immediately on being gathered, otherwise the nutrient matters contained in the shell become too hard to be dissolved in water. Others, as holly berries, require to be kept for about 12 months to mellow. It is said, and I believe in many instances proved, that seeds, such as those of the balsam, if kept for several years, are more apt to produce double flowers, in consequence, it would appear, of their nutrient matter being more condensed.

The period between sowing and germinating is very different according to species. Mustard, for example, will germinate in one day, or less, if stimulated with chlorine; cress in two days; turnips in three days; lettuce in four days; parsley in about six weeks or two months; the peach in one year; and the rose and filbert in two years.

It has been proved by experiments that seeds gathered before they are quite ripe, germinate sooner than very ripe ones, obviously because the nutrient matter is less hard and more easily diluted with water; and on the same principle, I have proved by experiment that potatoes when saved green for planting and kept in bran, will come several weeks earlier than others. It would be worth trying the roots of the dahlia and maruel of Peru, on the same principle. Though seeds when gathered before they are quite ripe germinate sooner, it does not follow that they will produce the best plants. *Rennie.*

Steam-Boiler.—This is an implement that no Farmer or Planter should be without, as potatoes, particularly, are nearly doubled in value, for feeding and fatting, when boiled. Turnips and other roots, and pumpkins, are also much improved, as food for cattle, by a similar process.

Boiled clover-hay is found very good for keeping Swine, during Winter; and we are of opinion, that if fed to Milch-cows, during that season, it would greatly improve the quantity of their milk, and keep them in better order, than when fed dry to them. We believe this to be well worthy of a fair experiment, by having a vat, or box, to hold the hay sufficiently large for the purpose.

Potatoe Starch.—Let the potatoe be taken and grated down to a pulp, and the pulp placed upon a fine sieve, and water made to pass through it: the water will be found to have carried off with it an infinite number of particles, which it will afterwards deposit in the form of white powder, seperable by decantation, which powder is starch, possessing all the essential properties of wheaten starch.—*Loudon.*

The time to eat Fruit.—Fruit, says Dr. Willich, should be eaten before dinner, or as a supper. A meal of fruit after a meal of meat *is* more than the stomach can dispense with; especially with a meal of pies and puddings *intervening*. Physicians, however, are not agreed on this point.

THE BREEDER & MANAGER.

SOUTH DOWN SHEEP.

A correspondent of the Cultivator thus notices a new importation of some of these valuable sheep, by a farmer in the interior of New York state.

"They were in fine condition, and did not appear to have suffered in the least from the voyage, which is a strong argument in their favor as to hardihood.

The buck is rather larger than they generally are, but of fine form and symmetry—great length, round and deep in body—fine in the head and legs—full and capacious chest—remarkably broad in the loin and heavy in the quarters—and well covered with a close fine fleece of wool.

The ewes are equally beautiful, and show higher breeding than the buck, and of course not so large. Take them together, I saw more to admire, more good points, more style and fashion about them than any others I ever witnessed.

This breed of sheep are justly becoming great favorites in this country. They will, I think, cross well with the Merino or our native sheep, giving them stronger constitutions and a greater aptitude to fatten.

From the transactions of the Pennsylvania Agricultural Society, I have transcribed the following account of this breed of sheep.

"The South Down sheep are much smaller than the Dishly—they are more hardy—their wool is short, equal in quality to that of half-bred Merino—their fleeces are not so heavy—they carry more fat within, and much more flesh without, than either the Dishly, Tunisian, Irish or Teeswater sheep. By their activity and vigour, both of muscle and constitution, they are fitted to encounter every difficulty, as well as to endure the extremes of heat and cold. They occupy, in England, one of the most exposed and least fertile portions of the island. Their mutton is of the finest kind, and commands the highest price, although, from the properties of the sheep, it can be produced at the least cost.

"I am of opinion," says this writer, "that the South Down sheep are as valuable a stock, if not more so, than any other that have been kept in this country."

"The fleece is close, heavy, and sufficiently fine for general purposes, and a small part fine enough for any purpose to which wool is likely to be applied for many years to come."

From the New York Farmer and Horticultural Repository, the following description of these sheep is taken.

"*The South Down sheep* are without horns; they have dark or black-grey faces and legs, fine bones, long small necks; are low before, high on the shoulders, and light in the fore quarter; the sides are good and the loin tolerably broad, back bone too high, the thigh full and twist good. The fleece is very short and fine, weighing from two and a half to three pounds. The average weight of two year old wethers is about eighteen pounds per quarter, the mutton fine in the grain and of an excellent flavor. These sheep have been brought to a high state of improvement by Ellman, of Glynde, and other intelligent breeders. They prevail in Sussex, on very dry chalky downs, producing short fine herbage."

[From the New England Farmer.]

HOG-PENS.

It is a trite, though no less true remark, that "*experience is the best teacher of wisdom.*" In no respect is this more true than in the planning and construction of dwelling houses, barns, &c. There is scarcely any one, who, after the most deliberate reflection and consultation, has erected a house, barn, or any other building, who cannot, upon use, see something that might have been made better or more convenient—and something that he would alter or amend if he could. Man's judgment is not *perfect*, nor never can be. We can scarcely go into the smallest dwelling-house, —even "the lowly cottage,"—or visit the smallest farming premises, where we cannot see some *convenience* not common to others; and some domestic arrangement, which might be copied by others with advantage. It is thus, by combining the greatest number of the conveniences of others, about our premises, that "the greatest happiness of the greatest number" will be promoted.

In no respect is there need of more improvement in the arrangement and construction of the out-buildings of the farmers in this vicinity, than in that of Hog-Pens. I have often regretted to see very lady and gentleman-like appearing hogs, with their numerous offspring around them, whose sweet and melodious voices,—particularly just before dinner,—indicated a remarkable propensity (as a phrenologist would say) to *sing*, compelled to inhabit premises, in which every thing but comfort and convenience is united. Without even a *bed of straw*, with a *dirty* place to take their food, and without any place in which they could exercise the business of "furrow-turners." an employment so congenial to their health and so agreeable to their feelings. I could not but feel sorry that so respectable and useful a race of animals, as the *whole-hog* family are generally considered, were not provided with quarters more convenient, pleasant and profitable.

Many years since, when I was a mere tyro in the business of farming, (and I now feel great want of skill in that occupation,) an old gentleman remarked to me that "hogs ought to *work* enough to pay for their keeping." Hogs work! thought I, the man must be *crazy*,—or does he mean to have them labor on the tread-mill. But time and experience have learned me, that by providing hogs with a plenty of muck, turf, &c. they will at least pay *much* towards their keeping, by the manure of the best quality, which they will *manufacture*,—and that too, without the aid of any kind of *machinery*, or any *water power*, *steam power*, or *any other power*, but *hog-power*.

Having had occasion, recently, to construct a hog-pen, in which I believe there is at least *one* improvement, I will describe it for the benefit of my brother farmers, and the good of all pork-eaters and pork makers in general—hoping and believing that for these my philanthropic efforts in the *swinish* cause, I shall, at least, receive a vote of thanks (an *honor* conferred on many others before me) from the innumerable *hog multitude*, with which our country abounds.

The aforesaid *hog-pen* is 21 feet long by 18 feet wide, with posts 8 feet long, which gives room for a chamber above from which, by a board left loose for the purpose in the floor, the hogs can be fed with corn, and in the summer with potatoes, &c. that may be put away there, without much labor. Ten feet across one side is occupied with three pens, and each pen has a yard in the rear (an indispensable I consider it) in which the *raw material* is manufactured into first rate manure. But what I consider the improvement is in first placing down the sleepers, then the floor, and then the *sills on the top of the floor*. Each pen is boarded inside as well as out; and here is the advantage, that notwithstanding the continual wet of a hog-pen, the sills being above the floor, they are kept dry and free from decay.

The great difficulty with hog-pens is that the sills rot so quick. By my plan a new floor can be laid, and I cannot see why my hog pen will not last as long as any other building.

The remaining part of it, not occupied by the pens, into which an external door opens, is occupied by a cauldron for cooking potatoes, &c. for my hog family, and by swill barrels, provender casks, and the usual et ceteras of a hog pen. The floor of the part not occupied by the hogs, is 9 inches above the other part, which makes it *dry*, and affords a handy place to feed them. One corner of each of the three hog apartments is devoted exclusively for their lodging,—which is constantly supplied with dry straw, to the no small comfort of my *porkers*, young and old.

If the above description shall conduce, in any small degree, to the better and more convenient construction of the hog-pens of my brother farmers,—or to the comfort, and consequently to the growth and fattening of that very necessary appendage to a farm,—*short-nosed*, *short-eared*, *short-legged*, and *broad-backed swine*, then my purpose will be fully answered.

FARMER C.

Bernardston, Mass. Dec. 2, 1834.

[From the New York Farmer.]

FEEDING PIGS ON RAW AND STEAMED FOOD.

We take the following report of experiments of feeding pigs on raw and steamed food, by Mr. Robert Walker, Ferrygate, Haddington, from the Prize Essays and Transactions of the Highland Society of Scotland.

We put up to feed, on the 4th of March, 1833, five pigs on steamed potatoes, and five on raw potatoes, with an allowance of 2½ lbs. of broken barley each lot: the barley, for the steamed lot, being steamed along with the potatoes. They were allowed the same quantity of potatoes, but, from the circumstances of their being, when put up, only 2½ months old, and from the same brood, we were not able to keep so accurate an account of the quantity of potatoes consumed, because, as they increased in size, they ate more potatoes.

The following Table will exhibit the improvement in pounds weight.

1833.	Weight in lbs.
March 4. Live weight of five pigs on raw food, - -	108
Ditto of 5 ditto, steamed food, - - -	106
Difference in favor of raw food,	2

March 19. Live weight of five pigs, on steamed food, - 114
Ditto of 5 ditto, on raw food, 111

Difference in favor of steamed food, 3

" 30. Live weight of 5 pigs, on steamed food, - - 137
Ditto of 5 ditto, on raw food, 123½

Difference in favor of steamed food, - - - 13½

May 1. Live weight of 5 pigs, on steamed food, - - 205
Ditto of 5 ditto, on raw food, 176

Difference in favor of steamed food, - - - 30

June 1. Live weight of 5 pigs, on steamed food, - - 279
Ditto of 5 ditto, on raw food, 223

Total difference in favor of steamed food, 56

In the three months, the pigs on steamed food have increased 173 lbs., being 67 lbs. more than double; while those on raw food have only increased 115 lbs., being 7 lbs. more than double their first weight, so that there can be very little doubt that steamed food is more profitable for feeding pigs than raw food. In fact, the reporter does not think it possible to make pigs fat on raw potatoes, without other food, when confined to them alone.

Fine Sheep.—Mr. Charles Peters, of this village, slaughtered a sheep one day last week which weighed when dressed 148 lbs. This sheep is one of 16 fattened by William Hallock & brothers, of Milton, Ulster county. The 16 were purchased by Mr. Peters at $12 per head, and have since been sold in the New York market at one shilling per pound. The sheep were of the Bakewell breed. *Poughkeepsie Telegraph.*

Chronic Rheumatism.—We are not ready to add to the number of the remedies which have been prescribed for this painful disease, without a certainty that such addition will be valuable in practice. This certainty we are convinced will attend the remedy it is the object of this article to bring before the profession. It is a mixture of equal parts of the balsam of sulphur and spirit of turpentine. Six drops of this mixture may be given morning and evening, and the dose increased two drops a day until it produces stranguary, when the dose should be diminished a little and continued until the disease is removed. We have been recently informed of the good effects of this mixture in a great number of instances, and one very remarkable case has fallen within our notice in which the disease in its worst form vanishes before it in a few weeks, although the patient had been long using without advantage the usual and other most powerful remedies for his troublesome and painful malady.—*Bos. Med. Intel.*

Bed Bugs.—A strong decoction of ripe red pepper is said to be as efficacious an antidote to bed bugs as can be selected from the multitudinous recipes for the same purpose.

THE GARDENER.

[From Bridgeman's Gardener's Assistant.]

On the choice of fruit trees in the nursery.

In the choice of fruit trees, all possible care and attention is necessary; for to have trees that do not answer the expectations of the proprietor is a great disappointment. As the young gardener may need such directions as are calculated to govern him in his choice, I shall endeavour to furnish them. Of whatever species or variety of fruit trees are wanted, choose those that are vigorous and straight, and of a healthy appearance. Whether they have been grafted or budded, be careful to select such as have been worked on young stocks. Grafts and buds inserted into old crooked stunted stocks, seldom succeed well.—Trees that are healthy, have always a smooth, clean, shining bark; such as are mossy, or have a rough wrinkled bark, or are the least affected by canker, should be rejected. Canker is discoverable in the young wood, and generally two or three inches above the graft or bud. If the tree be an Apricot, Nectarine, Peach or Plum, and any gum appears on the lower part of it, do not fix upon that. Let the tree you select (if a dwarf) be worked about six inches from the ground, and only one graft or bud should be upon each stock, for when there are more, the tree cannot be brought to so handsome a form.

In some of the preceding articles, I have shown that some description of trees may be transplanted with safety, even when far advanced in growth. When trees of four or five years' growth, after heading down, that are healthy and well furnished with fruit-bearing wood, close up to the centre of the tree, can be obtained, they will do very well; but great care is requisite in taking up, removing and planting such. Let the tree be taken up with as great a portion of the roots as possible, taking care not to bruise, split, or damage them; for want of attention to these points, trees often become diseased. Whenever (notwithstanding all due caution) any roots having been accidentally broken, split, or otherwise damaged in taking up the tree, let them be cut off; or if they cannot be well spared, let the damaged or bruised part be pared clean with a sharp knife, and an application of the following composition be spread over the wound, in order to keep the wet from it, which would otherwise injure the tree. To equal parts of soft soap and tar, add a little bees' wax; let them be boiled together, and when cold, they may be used. The necessity of pruning-in and dressing mangled roots, is more particularly required in trees of the stone fruit, such as Apricots, Nectarines, Peaches, Plums, &c.; for without the application of some remedy, they gum at the roots, which defect, if not counteracted, very materially injures the upper part of the trees, which may become so affected as never to recover afterwards; therefore, great care should be taken not to occasion such injury; and when accidents happen, all due caution and application is necessary, to promote a healthy and vigorous growth.

A young tree, likely to do well, should have roots nearly corresponding to the branches, at least, it should have one strong root in a similar proportion to the bole of the tree, with a proper distribution of branching fibres. Healthy roots are always smooth and clear, the colour of them varies a little according to the sort of the tree, but the older the roots are, the darker the colour is.

After the tree is taken up, be careful in conveying it to the place where it is to be planted, so that the roots are not chafed or rubbed. If trees are to be conveyed a considerable distance, they should be well guarded by straw or otherwise, in order to prevent injury. All damaged bruised roots should be pruned as soon as the tree is taken up, but if it be necessary to prune away any sound good roots, such pruning should be delayed until the time of planting. In pruning away roots, always let them be finished by a clear cut, and in a sloping direction, letting the slope be towards the under stratum, so that the wet may not be allowed to lodge upon the part so cut.—When trees are planted at an advanced season, in the spring of the year, it will be necessary to prune the tops; and if trees are removed that have been trained three or four years, and are not properly supplied with young wood, they must be cut down either wholly or partially, in order to obtain a sufficiency. In practising this upon Apricot and Nectarine trees, &c., always prune so as to have a leading shoot close below the cut, as it is very rare they will push a shoot below, unless there be a lead. This attention is not so particularly required in the Pear, &c., as such will generally push forth shoots, although no leading ones were left: but in all kinds the younger the wood is, the more certain are shoots to be produced. If a tree that has been under training for one or two years, should have only one good strong leading shoot, and two or three weaker ones which do not proceed from it, let the weak shoots be pruned clean away, and shorten the strong one, from which a handsome head may afterwards be formed.

In order to assist the reader to make a judicious choice of fruit trees, I have furnished a short description of such sorts as can be best recommended. Previous to making this selection, I carefully perused "Prince's Pomological Manual," also such parts of "Kenrick's American Orchardist," and "Lindley's Guide to the Orchard and Kitchen Garden," as was applicable to my subject; besides these important guides, I had the select catalogues of different nurserymen before me, and have chosen only such as have been most generally recommended; in doing this, I have had difficulties to contend with, the nature of which none but those who have duly considered the subject can form any idea. The facility with which seedling plants are raised, and the paternal fondness with which people are apt to regard their own seedlings, have occasioned hundreds of names to appear in the various catalogues which tend not a little to swell the large and increasing list of fruits.

In many instances, the English, French, Spanish and other names, provisional, local, and barbarous, are given to the same variety, consequently some fruits appear in the different catalogues under all the varied names; and the patience and labour necessarily requisite for ascertaining what

are worthy of cultivation, and what are really distinct varieties, is correspondingly great.

The annexed list and description of the first fifty varieties of apples, was politely furnished by William R. Prince, Esq., author of the "Pomological Manual," "Treatise on the Vine," &c.; in making out the other lists, I have generally adopted the names given in the catalogue of Michael Floy and Sons of the Harlaem Nursery, as a heading; and have caused the synonims or names by which the same variety is known or has been called, to be printed in italics; thus, my lists of about 300 varieties of the various sorts of fruit, will embrace what has been deemed by some, as different varieties perhaps to the number of a thousand.

APPLES.

1. *June Eating, Juniting, or Geniton.*—The fruit is small, of a roundish form, and yellow colour; it ripens in July; the pulp is tender and juicy; the tree a good bearer, and of small, low growth.

2. *Early red Margaret, or red June eating.*—The fruit is small and roundish; colour red striped; the pulp sweet, and of pleasant flavour; it ripens in July.

3. *Spring Grove*—The fruit small, and of a conical form, and pale green colour; it is ripe in July, and continues till September; the pulp is soft and juicy; tree hardy, a great bearer, and the fruit chiefly used in the kitchen.

4. *Prince's Yellow Harvest.*—The fruit of a medium size, depressed; of a pale yellow colour; the pulp is tender, slightly acid, but of an excellent flavour; ripens in July.

5. *Sinequanon.*—The fruit of medium size, roundish, but somewhat depressed; of a greenish colour, and very high flavoured; ripe in July.

6. *White Astracan.*—The fruit is roundish, angular at the sides, of medium size; the colour whitish, faintly streaked with red on the sun side, and covered with a white bloom; it ripens in August, and the pulp is very tender, pleasant and delicate.

7. *Golden Pearmain.*—The fruit large, roundish, and of a deep red and yellow colour; it ripens in August, and continues till October; pulp soft and sweet; a hardy tree, but not large; a good bearer, and the fruit much esteemed.

8. *Sugar Loaf Pippin.*—The fruit of medium size, ovate, or oblong; of a pale yellow colour; the pulp firm, but juicy, and of a highly pleasant flavour; it ripens early in August.

9. *Hawthornden.*—The fruit is large, and rather flat, and of a pale green colour; it ripens in August, and continues till January; the pulp soft, juicy, and acid; a very hardy tree; a great bearer, and the fruit good for all kitchen purposes.

10. *Red and Green Sweeting.*—The fruit large, of oblong shape; green colour, striped with red; ripens in August and September. The pulp is very sweet, tender, and of pleasant flavour.

11. *Borsdorf.*—Fruit medium size, conical form, and of a yellow green colour; it ripens in September, and continues till February; the pulp is firm, and of an aromatic flavour; tree of low growth, a middling bearer, but an excellent fruit for the table.

12. *Fall Pippin.*—The fruit very large, of a roundish shape; yellow colour; the pulp very tender, and of good flavour; ripens in September and October.

13. *Old Golden Pippin.*—The fruit small, roundish, and a gold yellow colour; it ripens in September and October; flesh firm and sweet, fit both for the dessert and kitchen.

14. *Pumpkin Sweeting.*—Fruit large, of pale yellow colour; pulp very sweet and pleasant; ripens in October and November.

15. *American Nonpariel.*—Fruit large and flat; colour yellowish ground, striped with red; pulp very tender, juicy, and high flavoured; ripens in October and November.

16. *Newtown Spitzenburg.*—The fruit of medium size, roundish and depressed; colour of a pale yellowish ground, greenish where shaded, but red next the sun; pulp very sweet, rich and pleasant; ripens in October and November.

17. *Wood's Transparent.*—Fruit small and flat, and of a green and yellow colour; ripens in October, and continues till February; flesh firm and juicy; hardy tree, great bearer, and excellent fruit.

18. *Sweet Bough.*—Fruit large, ovate, of pale yellow colour, tender, sweet, and pleasant in flavour; ripens in August.

19. *Ribstone Pippin.*—Fruit of medium size, roundish, and partially depressed; of a pale yellow colour, tinged with red; pulp slightly acid, and of fine flavour; ripens in November, and continues till April.

20. *Rhode Island Greening.*—Fruit large and depressed, of a greenish colour; slightly acid, and of fine flavour; ripens in November, and continues till April.

21. *Holland Pippin.*—Fruit medium size, ovate form, and of a gold and green colour; it ripens in October, and continues till February; flesh crisp and firm; tree hardy and large; a good bearer, and much esteemed fruit.

22. *Seek no Further.*—Fruit of medium size, depressed; of a whitish colour; flesh very tender, and of pleasant flavour; ripens in November, and continues till March.

23. *Esopus Spitzenburg.*—Fruit large and oval; of red colour; flesh yellowish; slightly acid, and of the first flavour; ripens in October, and continues till February.

24. *Pennock Red Winter.*—Fruit very large and compressed; of deep red colour; flesh tender, juicy, and of sweet and pleasant flavour; ripens in November.

25. *Flushing Spitzenburg.*—Fruit large, roundish, somewhat compressed; red striped colour, and of sweet and pleasant flavour; ripens in November, and continues till March.

26. *Red Winter Sweeting.*—Fruit large and compressed; of reddish colour; and of sweet and delicious flavour; ripens in November, and continues till March.

27. *Green Newtown Pippin.*—Fruit medium size, compressed; of pale green colour; flesh very high flavoured; ripens in December and keeps till June.

28. *Bringewood Pippin.*—Fruit small, nearly globular; colour bright yellow, tinged with red, pulp exceeding sweet, and highly perfumed.

29. *Downton Pippin.*—Fruit of moderate size, cylindrical, flattened at the ends; of yellow colour, with numerous specks; flesh firm, rich subacid; ripens in October and November.

30. *English Nonpariel.*—Fruit of medium size, and flat; of a greenish yellow colour, with a slight russet; flesh firm, rich and aromatic; ripens in November, and continues till May.

31. *Fenouillet Gris.*—Fruit rather small, roundish, ovate, of a yellowish gray colour, with a slight russet; pulp tender, saccharine, and high flavoured; ripens in November, and continues good till February.

32. *Red Winter Calville.*—Fruit large and oblong, of a pale red colour, deeper next the sun; flesh tender and of pleasant flavour; ripens in November.

33. *Dredge's Beauty of Wilts.*—Fruit medium size, and oval form, of a bright yellow, spotted with red; it ripens in October, and lasts till March; pulp firm and juicy; a great bearer, and the fruit good for all kitchen purposes.

34. *Ortley Pippin.*—Fruit of large size, pale yellow colour, often a tinge of red on the sunny side; flesh firm and high flavoured, ripens in November, and lasts till April.

35. *Lemon Pippin.*—Fruit of medium size, oval shape; colour yellowish green; flesh firm, pleasant, but not high flavoured: ripens in October, and lasts till March.

36. *Blenheim Pippin.*—Fruit large, roundish, of a yellowish color, tinged with red next the sun; pulp sweet and high flavored; ripe in November, and keeps till March.

37. *Graveinstein.*—Fruit rather large and compressed; a yellowish green color, striped with red, and high flavored; ripens in October, and lasts till January.

38. *Alexander*—Fruit very large, somewhat cordate, smallest at the crown; of a greenish yellow color, striped or marbled with red; pulp tender, sweet, rich and aromatic; ripens in October, and lasts till February. Though a large, hardy tree, it is a medium bearer, but a magnificent fruit.

39. *Franklin Golden Pippin.*—Fruit a medium size, conical, of a golddn yellow color, with gray and dark coloured specks; it ripens in November and continues till March; flesh firm, and highly aromatic; tree rather slender, and middling bearer, but an excellent fruit.

40. *Rambour Franc.*—Fruit large and compressed; of a pale yellow color, tinged with red; flesh tender, with a slight acidity; ripens in October and November.

41. *Newark King.*—Fruit large, oval shape; color red, striped with yellow; the pulp of a pleasant flavor; ripens in October, and lasts till January.

42. *Priestly.*—Fruit large, oblong; of a dull red color, faintly striped; the flesh of pleasant and aromatic flavor; ripens in December, and continues till April.

43. *Hughes' Golden Pippin.*—Fruit small, round, but particularly depressed; of yellow color, with numerous specks; flesh firm, juicy, rich, pungent and agreeable; ripens in October, and lasts till January.

44. *Beauty of Kent.*—Fruit rather large, and of irregular shape; of a yellowish green color, mottled with red; flesh firm and juicy, with a pleasant acid flavor; ripens in October, and continues till January.

45. *Monstrous Pippin.*—Fruit of enormous size, often weighing twenty-five ounces or more; of a pale lemon eolor; flesh tender, and of spright-

ly flavor, excellent for cooking; ripens in October, and continues fit for use till January.

46. *Long Island Russet.*—Fruit of medium size, depressed; russetty color, and of pleasant flavor; ripens by November, and continues till March.

47. *Winter Sweet Pearmain.*—Fruit small, roundish; of a dull red color, with green stripes; pulp very sweet, and of peculiar flavor; ripens in November, and keeps till March.

48. *Lady Apple or Pomme D'apis.*—Fruit small, flat; of pale yellow color, tinged with a deep red on the side; flesh crisp, sprightly and pleasant; ripens in November, and continues till April.

49. *Pomme Grise.*—Fruit rather large, somewhat depressed; russetty; of pleasant flavor; ripens in November, and lasts till March.

50. *Norfolk Beaufin.*—Fruit middling size, flattish, and a deep red and pale green color; it ripens in November and December, and lasts till August; flesh firm and savoury; tree hardy and upright, and a good bearer; fruit excellent for use in the kitchen.

51. *Early Crofton, or Irish Peach Apple*—An Irish apple, of the middle size and flattish shape; of an olive green color, much variegated with red; and has a rich saccharine flavor; ripens in August; it is much esteemed for the dessert, and excellent also as a sauce apple. The tree grows well and is not apt to canker.

52. *Dowell's Pippin.*—In size and form this apple resembles the Ribstone Pippin, but is more pointed at the head, and the eye is sunk in a more confined and deeper cavity; the skin is green, nearly covered with a clear thin russet, and slight tinge of brownish red on the sunny side; an excellent dessert apple from October to Christmas.

53. *Barcelona Pearmain, Glace Rouge, Kleiner Casselar Reinette, Reinette Rouge, Reinette Rousse, Reinette des Carmes.*—Fruit of medium size, oval, not angular; color, brownish yellow in the shade, but deep red next to the sun; flesh firm, yellowish, with a rich aromatic but slightly agreeable acid. A dessert apple from November till February. Tree a good bearer.

54. *Bell Flower*—A very large and beautiful apple, its color bright yellow, with an occasional blush on the sunny side; its form oblong; the flesh tender, juicy, rich, and finely flavored, and is alike excellent for the dessert or for cooking. It ripens early in November and will keep all the winter.

55. *Court Pendu, Capendu, Court Pendu Plat, Garnon's Apple.*—An estimable dessert apple of nonpareil size [small;] very flat in shape, the color yellow, and a good deal covered with full red; it is of high saccharine flavor and of close consistence; the fruit keeps till February or March. The tree grows upright and bears well.

56. *Malcarle, Charles Apple, Mela Carla.*—A far famed fruit. In the climate of Italy this is supposed to be the best apple in the world. It is cultivated extensively in the territories of Genoa, as an article of export and commerce to Nice, Barcelona, Cadiz, and Marseilles. The fruit is rather large, its form inclining to globular. Its beautiful waxen skin is a little marbled with a very faint green near the eye; its color in the shade is a pale yellow tinged with a flaming crimson next the sun; the flesh is white, tender, delicate, sweet, with the fragrant perfume of roses. It ripens in September and will keep till spring.

57. *Stroat, Straat.*—Is an autumn fruit, it is stated to be tender, juicy, well flavored, and according to Mr. Buel, in excellence it is not surpassed by any fruit in its season; a native.

58. *Swaar Apple.*—It is a highly celebrated winter table fruit in some parts of New York, and New Jersey; it is a large green apple of great and uncommon flavor and richness; highly deserving cultivation in every collection of fine fruits.

59. *Golden Harvey, Brandy Apple.*—A dessert apple not larger than the Golden Pippin; color light yellow, with a flush of red and embroidered with a roughish russet. It is called Brandy Apple from the superior specific strength of its juice; is of remarkable close texture, very rich in flavor, and will keep till April or May.

60. *Siberian Harvey.*—This fruit, which was raised by Mr. Knight from the Siberian Crab and Golden Harvey, is stated to be a small globular fruit of a bright gold color, stained with deep red on the side next the sun; the fruit growing in clusters on slender branches; the juice exceeding sweet; ripe in October. Specific gravity of its juice, 1,091.

Flowering Season of Fruit Trees.

Usually, one year with another, fruit trees in the United States are in bloom at the following periods:

	Peach.	Cherry.	Apple.
Montreal,	May 15	May 27	May 27
Brunswick, Me.	(none)	" 19	" 27
Albany, N. Y.	May 15	" 19	" 18
Boston,	" 10	" 10	" 10
New York,	April 20	April 30	" 6
Philadelphia,	" 15	" 25	April 25
Baltimore,	" 10	" 8	" 15
Lexington,	" 7	" 8	" 10
Richmond,	March 30	" 8	" 10
Charleston, S. C.	" 6	March 29	" 1
Fort Claiborne, Ala.	" 1	" 29	" 5
Marietta, Ohio,	April 1	May 1	" 1

[*Scientific Tracts.*

Greening apple.—The celebrated greening apple takes its name from the cognomen of the gentleman on whose land it was first discovered. This fruit was first found in Rhode Island, a short distance from Newport, near an inn kept by Mr. Green, hence it was called the Green-Inn Apple. A light change however has come over the old appellation, which is now simply Greening.—*Pawtucket Chronicle.*

The Cabbage—Internal Structure.—If the stem of the common Cabbage be divided transversely, it will exhibit, first a bask; then, an inclosed cylinder of a firm and compact texture, interspersed with a multiplicity of divergent rays, and approaching to the consistence of wood; and then, a large and firm pulp, or pith. The same structure pervades the root, also, which is furnished with but little pith. In some stages of the plant's growth, the concentric layers are not discernible on the transverse section; but in its stages of decay, the divergent layers disappear, and the woody cylinder separates spontaneously into a number of fine and concentric layers, resembling lace.—*Rev. P. Keith.*

MISCELLANEOUS.

Burns and Scalds.—Apply oil of turpentine frequently, and cover them from the air with carded cotton; or apply hogs lard or soft pomatum, mixed up with white lead. Or take of camphorated spirits two drachms, Goulard's extract one drachm, and a pint of water. The mixture to be made in the order in which they are set down, otherwise the camphor will separate. The application to be renewed till the inflammation subside; the wound may then be dressed with white cerate.

The following directions are recommended in cases of the burning of females, by their clothes having caught fire. If no person is present to assist her, she may relieve herself by throwing her clothes over her head, and lying down and rolling upon them. She must by no means run away, the flame always tending upwards; much of the mischief will be prevented if a person in that unfortunate situation will throw herself on the ground, if possible roll about her a carpet, hearth-rug, &c. If any person be present, then, without any regard to delicacy, such person should instantly pass the hand under all the clothes to the lowest garment, and raise the whole together, and close them over the head, by which, in an instant almost, the flame will be indubitably extinguished. This is the most expeditious and effectual method of preventing the dire effects of a terrific accident which is perpetually occurring.

Or, roll in the carpet. This is one of the many accidents owing to the preposterous custom of open fire places, and muslin dresses in winter.

Domestic Encyclopædia.

Preserving the Eyes.—Few remedies for preserving the eyes are more refreshing and invigorating than bathing them in cold water three or four times in the day.

In common inflammations of the eyes, a very cheap and efficacious remedy is a solution of ten grains of *Sugar of lead*, in half pint of rain, river or snow water, premising one or two purges. Leeches are also highly useful in this complaint. Eyes naturally weak may be strengthened, by frequently washing them with green tea: to a cupful of which, add a teaspoonful of brandy; and by wearing a white hat, with black underneath in summer.—*Domestic Encyclopedia.*

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BALTIMORE PRODUCE MARKET.

☞ *These Prices are carefully corrected every* MONDAY.

	PER.	FROM	TO
BEANS, white field,	bushel.	——	3 00
CATTLE, on the hoof,	100lbs.	5 00	6 00
Slaughtered,	"	3 00	4 00
CORN, yellow,	bushel.	56	——
White,	"	56	——
COTTON, Virginia,	pound.	12	15
North Carolina,	"	14	16
Upland,	"	14	16
FEATHERS,	pound.	35	37
FLAXSEED,	bushel.	1 62	1 70
FLOUR—Best white wheat family,	barrel.	6 00	6 50
Do. do. baker's	"	5 50	6 00
Do. do. Superfine,	"	4 75	5 00
Super Howard street,	"	4 62	4 75
" " wagon price,	"	4 50	——
City Mills, extra,	"	4 87	5 00
Do.	"	4 75	4 87
Susquehanna,	"	5 25	——
Rye,	"	4 00	4 12
GRASS SEEDS, red Clover,	bushel.	5 50	6 00
Timothy (herds of the north)	"	3 00	3 50
Orchard,	"	3 00	3 50
Tall meadow Oat,	"	2 00	2 50
Herds, or red top,	"	1 25	——
HAY, in bulk,	ton.	16 00	——
HEMP, country, dew rotted,	pound.	6	7
" water rotted,	"	7	8
HOGS, on the hoof,	100lb.	5 00	——
Slaughtered,	"	5 50	——
HOPS—first sort,	pound.	15	——
second,	"	13	——
refuse,	"el.	11	——
LIME,	bush	30	33
MUSTARD SEED, Domestic,	"	5 00	6 00
OATS,	"	30	33
PEAS, red eye,	bushel.	60	——
Black eye,	"	80	85
Lady,	"	100	——
PLASTER PARIS, in the stone,	ton.	3 12	——
Ground,	barrel.	1 37	——
PALMA CHRISTA BEAN,	bushel.	1 50	1 56
RAGS,	pound.	3	4
RYE,	bushel.	60	63
TOBACCO, crop, common,	100 lbs	4 25	5 00
" brown and red,	"	5 00	7 00
" fine red,	"	7 00	9 00
" wrappery, suitable for segars,	"	6 00	12 00
" yellow and red,	"	8 00	12 00
" yellow,	"	13 00	17 00
" fine yellow,	"	15 00	25 00
Seconds, as in quality,	"	3 50	5 00
" ground leaf,	"	5 00	9 00
Virginia,	"	4 00	——
Rappahannock,	"	——	——
Kentucky,	"	4 00	9 00
WHEAT, white,	bushel.	1 03	1 09
Red,	"	90	95
WHISKEY, 1st pf. in bbls	gallon.	31	32
" in hhds	"	29	——
" wagon price,	"	27	28
WAGON FREIGHTS, to Pittsburgh,	100 lbs	——	1 25
To Wheeling,	"	——	1 50
		washed.	*unwash*
WOOL, Prime & Saxon Fleeces,	pound.	50 *to* 60	24 *to* 26
Full Merino,	"	44 50	22 24
Three fourths Merino,	"	37 44	22 24
One half do	"	33 37	22 24
Common & one fourth Meri.	"	30 33	20 22
Pulled,	"	31 33	22 24

WESTPHALIA GEESE.

A FEW pairs of these very superior Geese are now ready for delivery at 5 dollars a pair. Apply to I. I. HITCHCOCK,
no 18 Amer. Far. Estab.

WHITE TURKIES.

I HAVE now ready for sale several pairs of these truly beautiful fowls, at $5 a pair, they are of this year's crop. I. I. HITCHCOCK,
no 18 American Farmer Establishment.

BALTIMORE PROVISION MARKET.

	PER.	FROM.	TO.
APPLES,	barrel.	$3 00	$5 00
BACON, hams, new,	pound.	11	——
Shoulders,	"	8	9
Middlings,	"	——	——
BUTTER, printed, in lbs. & half lbs.	"	25	37
Roll,	"	15	25
CIDER,	barrel.	——	——
CALVES, three to six weeks old	each.	3 00	6 00
COWS, new milch,	"	17 00	30 00
Dry,	"	6 00	10 00
CORN MEAL, for family use,	100lbs.	1 50	——
CHOP RYE,	"	1 50	——
EGGS,	dozen.	19	20
FISH, Shad, salted,	barrel.	5 75	6 00
Herrings, salted, No. 1,	"	4 75	——
Mackerel, No. 1, 2 & 3,	"	5 00	7 00
Cod, salted,	cwt.	2 50	3 00
LAMBS, alive,	each.	1 25	2 00
Slaughtered,	quart'r	31	50
LARD,	pound.	8	9
ONIONS,	bushel.	62	75
POULTRY, Fowls,	dozen.	1 50	2 25
Ducks,	"	——	2 50
POTATOES, Irish,	bushel.	40	62
Sweet,	"	——	——
TURNIPS,	"	37	50
VEAL, fore quarters,	pound.	3½	4
Hind do.	"	6¾	——

ADVERTISEMENTS

TO NURSERY MEN.

1630 Peach Stocks—One year old.
45 do. do.—two years old.
520 Pear do. two do. do.
740 Apple do. two do. do.
For sale cheap. Enquire at this Establishment.
Dec 9.

GRAPE VINES.

HERBEMONT'S Madeira, one, two, and three years old, from 25 cents to 75 each.
Isabella, two and three years old, at 25 to 50 cts each.
Catawba, one year old, 25 cts. each.
White Scuppernong, two years old, at 37½ cents each.
Sultana, one year old, at 50 cts. each.
Woodson, two years old, at 37½ cents each.
Red Bland, one year old, at 25 cts. each.
Are for sale at this establishment, and will be well packed to go any distance. no. 25

GAMA GRASS SEED

JUST received, and for sale at this Establishment—Price 50 cents per ounce.

PEA FOWLS.

ONE pair 2 years old, and one pair 3 years old, for sale at this establishment. Price $3 a pair. no 4

MORUS MULTICAULIS.

THE subscriber has on hand a few hundred of this celebrated Tree, unrivalled in the quality of its leaves as food for the silk worm, for which he is ready to receive orders (accompanied by the cash) with *particular* directions for the delivery of the trees on or after the first of Nov. next. Price 50 cents each, $5 per dozen, or $40 per hundred.

The success and ease with which this tree is propagated, the extraordinary quickness of its growth, the superiority of its leaves over *all* others for the silk culture, and its uncommon luxuriance and beauty, altogether recommend it to the favourable notice of *every farmer* as a most valuable acquisition. I. I. HITCHCOCK,
aug. 26 Amer. Far. Estab.

BULBOUS ROOTS.

HYACINTHS, Tulips and a general assortment of Bulbous Roots, suitable for the present season, for sale low at this establishment by
Oct. 28. I. I. HITCHCOCK.

BAKEWELL RAMS.

TWO Bakewell Rams of good size and quality, for sale by a farmer near Baltimore at $20 each. Apply to I. I. HITCHCOCK,

FRUIT TREES—CHEAP.

An Invoice of fruit trees from a first rate nursery, having been missent, is offered by the owner for sale a at reduced amount. The opportunity is a favorable one for procurring a lot of first rate trees, at a great bargain. The following is a list of the trees which are laid in the ground by the heels so as to continue unhurt till next spring if necessary.

APPLES.
2 Monstrous Pippin.
2 Flushing or Esopus Spitzenburgh.
2 Royal Pearmain.
2 Long Island Russet.
2 Winter Pearmain.
2 Alexander—a new Russian apple, very large and of great celebrity.
2 Rhode Island Greening.
2 Pomme d'appi, or Lady apple.
2 Carthouse.
2 Newtown Spitzenburgh.
2 Bellflower.
2 Vandevere.
2 Red sweet Vandevere.
2 Michael Henry Pippin.
1 Winesap.
1 Rambo or Romanite.
1 Large Yellow Newtown Pippin.
6 York Greening.
7 Red Streak.

PEACHES.
1 Teton de Venus.
4 Malcaton.
1 Lehman's cling.
2 Gough's Cling.
3 Oblong open Peach.
1 Fine Cling.
2 Early Etna.
4 Budded trees that have lost their labels.

PEARS.
2 Jagonelle.
1 Portugal.
1 Summer bergamot.
1 Ambert.
1 Butter.
1 Seckel.
2 St. Germaine.

PLUMS.
1 Peters' large Yellow Gage.
1 French do. do.
1 Gage.
1 Egg.
1 Imperial.
1 Bolmar's Washington.
1 Blue Damascene.

CHERRIES.
2 Morrello
1 Orleans.
2 May Duke.

QUINCES.
1 Portugal
1 Orange

The Invoice including packing mats, &c. amounts to $30, and the whole will be sold for $20, which may be sent to I. I. HITCHCOCK.
Amer. Farm. Estab.

AGENCY FOR TREES, &c.

THE subscriber respectfully offers his services to his customers and the public generally, as agent for the procurement of Fruit and other Trees. It may not be generally understood or duly considered, that few nurseries contain *all* kinds of trees in equal perfection. One, for instance, is celebrated for its fine apple trees, another for its peaches, and a third for its plums or pears, while scarce any of them can make up a collection of *all kinds* of trees of the best quality. In this respect the subscriber flatters himself that he possesses peculiar advantages. His own nursery is not extensive or forward enough to afford many trees for sale yet, and his acquaintance with nearly all the most eminent nurserymen in this country, and of the peculiar excellencies of their respective establishments enables him to select from them all, probably a better collection of fruit trees than any one of them can furnish. Trees ordered from any particular nursery, or to be selected by me, will be charged at nursery prices and 10 per cent commission added. Orders ought to be forwarded immediately, and all confided to the subscriber's agency shall receive his best attention.
I. I. HITCHCOCK,

THE FARMER & GARDENER;

AND LIVE-STOCK BREEDER & MANAGER.

CONDUCTED BY I. IRVINE HITCHCOCK, AND ISSUED EVERY TUESDAY FROM THE AMERICAN FARMER ESTABLISHMENT, AT $5 PER ANNUM, IN ADVANCE

No. 36. **BALTIMORE, JANUARY 6, 1835.** **Vol. I**

☞THIS publication is the *successor* of the late
AMERICAN FARMER,
(which is discontinued,) and is published at the same office, at five dollars per year, payable in advance.
☞When this is done, 50 cents worth of any kind of seeds on hand will be delivered or sent to the order of the subscriber with his receipt.

American Farmer Establishment.

BALTIMORE: TUESDAY, JANUARY 6, 1835.

THE NEW YEAR.---We conform to the long established usage of noting the transition from the old to the new year. The custom is not only natural, but salutary. We wish that all the established usages of civilized society were as well founded and as usefully exercised as this.

The effect of the general expression of kind feelings and good wishes peculiar to this season, can hardly be other than salutary, by creating, in some degree, those feelings in our hearts. The custom also of adjusting our accounts with each other, and of ascertaining our gain or loss the past year, by our avocations, is an excellent one, and ought to be closely adhered to.

We tender to our subscribers and customers the compliments of the season, and renew our promise still to do them all the good we can, and the least possible harm.

GAMA GRASS.—We lay before our readers this week a letter on this subject from one of the earliest and most zealous cultivators of it. In a private letter accompanying his communication, the writer says :—

"Viewing the Gama grass as an adopted child of mine, I feel a consequent partiality, and have made a number of experiments in the *mode* of planting to ascertain its *real* value—the enclosed is the result of one with which I confess myself gratified, and I think it goes far to settle that point. Next year, when it will have filled the ground with its roots, I shall add the *steelyard*, and weigh every cutting of *two acres*—In yours of the 12th, I was much gratified to find you had it *growing*, but sorry it stood so *thick*—The best mode of planting in the *seed bed* is to drill the *first* year 12 inches apart, rows two feet—The next spring take up the bunches, and *divide* them like shallots—this course I should take *next* spring. By all means keep it cut every month, as this is found to *increase* the roots. This grass ought to be set out at farthest the second spring, but may be taken up like the sweet potatoe slip and set out the *first year* when the plants are 6 inches high.

"When I have a sufficiency of seed I adopt the *last* plan, but if anxious to propagate and have not plenty of seed, I take the *first*—The enclosed paper gives the detail. I have generally planted in a *dry* soil, but have succeeded admirably in a *bog*. The roots you obtained could not have been judiciously packed up—few understand this operation—I never fail by putting the roots in a *clay retentive* of *moisture*, and pack up in our *moss*, first sprinkling with *water*.

I regret extremely that your request as regards seed came too late. The seed drops generally in *all* July, but the *next* season, *you may count on me*. You cannot form any idea of the increased and increasing call for this seed from every part of the union."

NEW-YORK, Dec. 20th, 1834.

To the Editor of the Farmer and Gardener :

The pedigrees furnished you by Mr. Grieve,* are carefully taken by him from my cattle book, and are therefore to be relied upon as coming from me. Yours, respectfully,

[*See page 249.] DAVID HOSACK.

NEW AGRICULTURAL PAPER—We have received "No. 1, vol. 1," of the TENNESSEE FARMER, printed at Jonesborough, Tenn. by Thomas Emmerson, Esq. It is a neat octavo of 16 pages, to be issued monthly at $1 a year. It is a good omen, that the press is becoming more and more used for the benefit of the first of human interests—Agriculture. We heartily wish the editor success in his praiseworthy undertaking.

OHIO TOBACCO.---The Baltimore American has the following remark, in regard to the assorting and packing of Ohio Tobacco. We hope those interested will take a hint in a matter which so much concerns them.

"We have been requested to state, for the information of the growers of Ohio Tobacco, that great complaints are constantly made in relation to the manner in which their Tobacco is sent to market. The Tobacco raised there, generally consists of green, red and yellow, which are indiscriminately packed in the same hogshead.—Upon being opened for inspection, a fair sample cannot be drawn, and when offered in a foreign market, the article is worth but little more than if it consisted altogether of the worst description. It is said that about nine tenths of the whole quantity sent to market is thus mixed. Planters, by bestowing more attention to the suggestion here made, would find their interest greatly promoted, as their Tobacco would bring better prices and meet with a more ready sale."

We will next week publish an excellent article on this subject, and we invite the editors of Ohio to copy it for the benefit of their subscribers.

[*Ed. Farm. & Gard.*

THE MARKETS.---The ground is covered with snow, to a great depth for this climate, though our harbor continues open, and our tow-boat is ready on a moment's warning to pitch battle with Jack Frost, should he offer to set his seal upon our river.

Trade is paralized by the weather, except indeed for articles connected with sleigh riding, which are just now in great request, and command high prices. Our Price Current must be considered as rather a nominal affair for the present.

SUGAR FROM BEETS.—The manufacture of sugar from beets, which Napoleon endeavored to introduce generally into France, has grown lately into great importance. Millions of pounds of sugar are thus made. The principal cause of the extension of this manufacture is the discovery of the great benefits to agriculture connected with it. After the sugar has been extracted, there remains so nutricious a pulp, that in two months, without the employment of any other food, a great number of cattle may be fed upon it. The French Colonists, it is said, are becoming alarmed at the progress of this new branch of industry.

Mode of extracting Wax from honey comb.—Have on the fire an open vessel of boiling water, and standing by the fire an open vessel of cold water; put the comb close tied in a canvas bag, into the boiling water, and repeatedly squeeze it down with a stick or large wooden spoon; the wax will come through the bag, and swim on the top of the water: skim it off and put it in the vessel of cold water; by repeatedly squeezing the bag and skimming, every particle of wax is obtained; when congealed on the cold water it may be taken off and melted and cast into moulds, of any convenient shape for sale.—*Glasgow Mechanics' Magazine.*

THE FARMER.

Gama-Grass—mode of Cultivation.

[For the Farmer and Gardener.]

Among a number of experiments made, and making, by myself, and through the aid of kind friends, disposed to second my intentions, for the purpose of ascertaining the mode of cultivating the Gama-Grass, best calculated to bring that plant to the highest perfection, I have now sufficiently ascertained the result of the following, to feel justified in giving it to those who are cultivating that grass.

In the spring of 1830, I planted out a seed bed, drilling in rows 18 inches wide, 12 from plant to plant—they came up, and grew off well.—Early the following spring, I took up the plants, divided them, and set out, preparing the ground previously as follows:—The soil a grey sandy land, on a red, loamy loose clay—The top soil six to nine inches, dark grey, and sometimes inclining to black—The land had been two years in corn and peas, and was well set with crab grass—had made only three crops—The last year the pea vines, and grass, were permitted to rest entirely on the soil—About the first of October, the land got a good dressing of *compost* manure, *stable* dung, and *cow pen* with *swamp mud*. The cattle had been well littered with *oak-leaves*, and *rye-straw*, and the manure was literally *long manure*, in making which, not a particle of the liquor, or *urine* was suffered to be lost. This manuring was ploughed under in imitation of *trench* ploughing—one plough (bar shear,) following another of the same, but smaller—which effectually turned grass and pea vines under at least fifteen inches—on the top, rye was harrowed in, going with the furrow—previous to sowing the rye, the land was dressed with *rotten* limestone, a species that abounds in this section of country, and which had become pulverized by the preceding winter's *frost* and *rain*.

The rye came up, and grew off well—uncommonly rank, and furnished a fine mass of food for *calves*, and *hogs*, until the last of February, when all were taken off. By the first of April it was rank again. On the 2d, another top dressing of the *compost*, but in a state of more perfect decay, was applied, and well turned under with a *small* Freeborn plough—harrowing with the furrow—The ground was now carefully laid off in drills, at two feet, and the plants placed in them, at the same distance.

During the year it grew well—the following year it "shot ahead," and this season, it is "out of sight," of any I have been able to raise, or have seen raised by the many gentlemen to whom I distributed seed. Every cutting since the *first of May*, (and that one averaged three feet,) has exceeded forty five inches in length. It was prevented from *seeding*, for the purpose of ascertaining the production. After the cutting in May, rotten cotton seed was strewed over the ground—and which was worked in amongst the roots, when the ground received a loosening amongst the plants, after that *first* cutting. The season has been highly favorable. The cutting took place on the first day of each month, commencing with *May*—and five cuttings have been made—the grass fed away, green, to working oxen, horses, and mules—cut up in a patent cutting box, and mixed with about one fourth of oats straw, (not threshed) a sprinkling of meal was added, say one pint tin cup full to each animal twice per day. At *each cutting*, a number of the *smallest* bunches were weighed, and also of the *largest*—None found less than *five* pounds, and many *fifteen*, and some *sixteen* and *seventeen*—A fair average, I am satisfied, would be, *eight pounds per plant, at each cutting*—and *seven* cuttings in the season—In the *mode* of *planting* to which the extraordinary luxuriance was owing, I was governed by a knowledge of the singular *depth*, to which this plant extends its roots into the earth.

Believing that a deep *soil* by nature, or made so by art, was alone calculated to show the *best* production of this plant, I have been anxious to see the result, under *favorable seasons*, and confess myself now satisfied.

From each cutting, I made a small *stack* of *hay*, cutting after the *dew* was off, and mixing, alternate thin layers of grass, and *oats straw*, with a sprinkling of *ground alum salt*, on each layer of grass.—It cured well.

A few handfulls of each cutting were cured, *alone*, in the *sun*—that cut in May, gave *fourteen* pounds of grass—*six* pounds of hay—each cutting gaining in result. AGRICOLA.

Alabama, Oct. 4th, 1834.

Great scalding and loss of life—Horrid butchery.

A correspondent of the Baltimore Patriot has written a most *sanguinary* letter from Cincinnati, describing the manner in which hogs are "used up" in that celebrated capital. Some of the statements would, in our opinion, better become a "fish story" than the subject concerning which they are made, but we shall, nevertheless, re-*tail* them for the amusement if not for the information of our readers. He tells us that—

"Cincinnati is the greatest "Pork market," in the known world. The number of hogs slaughtered annually, and the perfection and science to which the art of "hog-killing" has been brought, is indeed astonishing. The business of *butchering*, is carried on distinct from that of *packing*, and by different persons. The most extensive establishment of the kind, is the one on Deer Creek, owned and conducted by Mr. John W. Coleman. At this place, last year, 100,864 hogs were slaughtered. There are four houses situated at different points on the ground occupied, which is a lot of eight acres—the ground is divided into pens some 40 or 50 in number, where the hogs of each owner are put by themselves preparatory to the massacre. About 40 men are employed in each house, and each has his separate and allotted duty to perform, and receive on an average about $1 25 per day. Each house has two scalding tubs, one at each end, so that the work of 'death and destruction' goes on *double* in each building. At each end of the house is a small pen, into which they crowd 40 or 50 hogs, or as many as can possibly be got in—then walks in on their backs, the dark and bloody executioner, holding in his hand a large sledge hammer, with which he 'deals death' to the unoffending victims—after which they are dragged inside the house, a knife passed into the throat, and after bleeding a few seconds, thrown into a kettle of hot water, from thence to a block, where the bristles are scraped off with iron scrapers, made expressly for the purpose—then strung up by their hind feet and dressed—thence removed to another room, where they remain 'to cool' until morning, and then taken on wagons to the packing houses. It is but a little over *one minute from the time the executioner enters the pen and knocks the hog down, till he is strung up and dressed.* The bleeding, scalding, scraping, stringing up, and inside dressing, is *all* accomplished in about *a minute*. This will be thought marvellous, but it is no more strange than true. I have frequently witnessed with astonishment the operation. At one of Mr. Coleman's slaughter-houses, he has a man that opens, removes the offal, and completes the dressing of *three hogs in a minute*—to this man (who is a sort of king among the hog-killers) he pays two dollars and fifty cents per day.

They can slaughter at each of the houses, and have them completely dressed and strung up, (preparatory to removal in the morning to the packing houses,) *six hundred and fifty in a day*, which is altogether, at this one establishment, *twenty-six hundred*—and this done from day-light in the morning till dark, say at this time, about *eleven hours*, allowing 30 minutes for dinner. Mr. Coleman informed me, that he has already killed this fall between 50 and 60 thousand, and has been at work but 3 or 4 weeks; the only pay he receives is the offal, consisting of rough fat, soap grease and bristles; this is generally worth, nett 20 to 25 cents each hog. It is supposed he cleared at this business last season (and the season lasts but about three months) some 15 or 20,000 dollars. The whole number of hogs killed last year, in the city and vicinity, is ascertained to be a little rising *one hundred and twenty-three thousand*. Deer Creek is a stream running into the Ohio river on the eastern suburb of the city; about half a mile up this stream, these slaughter-houses of Mr. Coleman are situated, and during the whole 'hog season,' this stream, from the houses to the river, is running blood, and generally goes by the name of 'bloody river.'

Others are engaged in the slaughtering business, but not on so large a scale as Mr. Coleman, who is, what Yankees call, a 'smart' man.

From the slaughter houses, the hogs are conveyed in large wagons, that hold from 25 to 40, to the various packing houses, which are situated in almost every part of the city, and there weighed, cut up, packed, &c. The purchasers pay for them as per the weight, after being dressed. These packing houses are upon the most extensive scale. The capital employed every year in the 'hog business,' is immense, probably about *two millions of dollars*. One of the most extensive packing houses in the city, is owned and conducted by Miller & Lee; their building is of brick, three stories high, 120 feet long, 60 wide, with outbuildings, sheds, &c. that cover for aught I know, an acre of ground. These men, who are very enterprizing, have a high reputation for the uniform excellence of their Pork, as also for their

superior Hams; their '*sugar hams*' are said to be as good as any cured in any part of the Union. There are other 'Pork Houses' equally large, and on as extensive scale. At one of these they can pack and have ready for shipment *two hundred and fifty barrels of pork in one day*, and I am informed, upon a pinch, *three hundred barrels* could be turned out, and that with *thirty men in about fourteen or fifteen hours.* It is, indeed, astonishing, the rapidity with which they put a hog out of sight, when they once get fair hold of him. As at the slaughter houses, a perfect system is kept up, every man has his allotted duty to perform, and there is consequently no interference with each other; every thing goes on 'like clock work;' when the hogs are received, they are first weighed, by the weigher, then passed to the "blocking men," who place them on the several blocks, (two are generally used) when they are received by the "*Cutters*," and are very quickly despatched; the various qualities separated and thrown into their respective places. One man weighs for the barrels, (200 pounds,) and throws the meat into the "*salt box*," from which the "*Packer*" receives it, and when the barrel is packed is turned over to the "Cooper," who heads it; it is then bored, filled with a strong brine, plugged, branded, and ready for shipment. Fifty pounds of Turks Island, or other coarse salt, is allowed to each barrel of pork.

The Lard is cut into small pieces before going into the kettles; the leaf lard goes into one kettle, and the rough lard into another; there are generally eight or ten men employed in the lard department, when an average of *two hundred kegs, or about nine thousand pounds are turned out daily.*

A large quantity of "bulk meat," is generally produced, this is from small hogs, too light for prime pork. The hams are smoked and generally canvassed before shipping. They are, however, very unlike a lot of Kentucky canvassed hams, sold a few years since at Port Gibson, which on examination, after the seller had gone, were found to be of *wood*, instead of "hog meat." Better hams cannot be procured than those smoked in Cincinnati. The hams cured by Miller & Lee, W. Hartshorne, W. M. Walker, William Irwin, and in fact, by all our "Pork makers," can rarely be equalled in quality. Technical names are used in Pork Houses as well as in most branches of business. The following are a few of them: "*Blockers up*," "*Cutters*," "*Briners*," "*Kettle Tenders*," "*Choppers*," "*Lard Trimmers*," "*Ham Trimmers*," "*Bulkers*," "*Lard Drawers*," "*Packers*," "*Coopers*," "*Weighers*," &c. &c.

I am informed, the largest quantity of Pork packed last year, by one house, was Burdsell and Davis, for the Messrs. Winchesters of Boston, the number of barrels being between 5 and 6000. No one establishment will pack as much this year. Many of our merchants are engaged largely in the packing business, at various points in the vicinity of the city,—At Rossville, Hamilton, Middletown, Lawrenceburgh, &c. It is estimated that the quantity of Pork exported last year, from Cincinnati, which includes that packed in the above towns, fell very little short of 45,000 barrels, about 85,000 kegs of Lard, 270,000 Hams, besides Shoulders, Sides, bulk meat, &c. One of our enterprising citizens alone purchased, I am told, last year, 35,000 kegs of Lard, and fortunately it proved a profitable investment. There are altogether in the city, about 26 or 27 pork houses, and they now employ about 10 to 1200 men, at an average of a dollar per day. At the commencemont of the season Hogs appeared plenty, and were purchased at a fraction lower than last year, say $3 per hundred for those averaging 280 pounds. I am informed that they are now becoming more scarce, and that the price is advancing. There will not be so many packed this year as last. Some that were engaged in it last year, lost more or less money, owing to the distress in the country, and the impossibility of effecting sales at fair prices; so that there are, probably, not as many engaged in the business as formerly. Money now being more plenty than last year, and a general demand existing for the article, ready sales at fair prices will be made. The demand now in this market for Pork and Lard is good, and a gradual advance in price has and will continue to take place. Most of our pork packers are men of wealth, and can consequently "hold on," there will be no necessity of forcing sales. However, they cannot pack enough before the season closes to supply the demand, which is much increased by many of the army contractors being in the market, and wishing to purchase to fill their contracts."

[From the Political Arena.]

[*Communicated.*]

The members of the Agricultural Society of Fredericksburg commemorated their 16th Anniversary on Thursday and Friday last; on which occasion they had a Show and Fair, much superior to any but one, that they have ever had before; for although the number of Animals exhibited fell short of that brought forward at one or two of their first exhibitions, they were generally of far better quality. This remark applies particularly to the Stallions, Colts and Bulls—the premium Animal in each of these cases being uncommonly fine; which circumstance warrants the belief that the effort to improve the breeds of our horses and cattle are now much more zealous, as well as more judiciously directed than formerly.

This last meeting was also distinguished, not only by a much fuller attendance of old members than for several Anniversaries past; but by the accession of twenty new ones, most of whom are practical Agriculturalists. Such increase of strength in members, as well as of zeal in those long attached to the society, affords strong evidence, not only that the Society itself, by its vigorous continuance, will wipe away the old reproach, that Virginians can never persevere in any good work: but that the spirit of improvement in every branch of husbandry is now actively at work in a very large portion of the ancient dominion; and that the most beneficial result may be anticipated from it future operations. This society, it is believed is not only the oldest in Virginia, but the only one that has been kept up from its first establishment to the present day; and there is every reason to hope, from present appearances, that its members, (to borrow a sailor's phrase,) "will never give up the ship."

We regret to add, that our good friends—the ladies—did not exhibit as many articles of domestic Manufacture as usual; but it is a tribute we gratefully pay to them to remark, that such as *were* exhibited afforded very excellent specimens of what their industry, skill, and ingenuity can accomplish, whenever they choose to exert them. We have great reliance upon their aid; and should seriously lament any intermission of their previous co-operation in the effort to interest the public in our exhibitions. If they desert us, from any fault on our part, we shall deserve all that may happen to us in consequence of this desertion.

Among the curiosities exhibited at the meeting were twenty-five stalks of corn, with their produce of one hundred and four ears,—the average being a fraction over five ears to the stalk. This corn was raised on high land by Mr. G. W. Basset, one of the members, and probably the same variety recommended by the President. It is called in Spottsylvania, Alsop's corn, from the name of the farmer who first brought it into notice. Another member stated that he had cultivated the same kind on low land, and that he was confident he could gather a greater number of ears from the same number of stalks.

The other curiosity was some seed having exactly the same appearance with that of the Gama-Grass, and believed by those who saw it to be identical. It was found by Mr. Jno. Dickinson, —another member of the society, in some low land, upon his farm on the Rappahannock, in Caroline County, about 16 miles below Fredericksburg; and was gathered from 2 bunches of grass which, (as he stated,) resemble the gama-grass in every respect.

These two circumstances are not of much moment in themselves; but they add to the mass of such facts, as it is one of the purposes of Agricultural Societies to collect, and to disseminate; and therefore they are offered for publication in your useful Journal.

The introduction and general extension of the Lyceum System is destined to produce more benefical results to our country than any other of the many improvements of this enterprising age, was the opinion of the late Mr. Grimke, who united in a rare degree the highest endowments of intellect with a pure and zealous philanthropy, and an industry that never tired in the pursuit and diffusion of knowledge, and whose untimely death was a national calamity. Nor can such an opinion be regarded as extravigant, when it is known, that the design and tendency of this system is, to bring *every child* in the nation within the pale of instruction.

We are glad to learn that the Baltimore Union Lyceum, only recently established, is making most successful progress towards the accomplishment of its high purpose—which is, besides extending the blessings of education to every child in the city, to create and keep alive in the community a spirit that shall work general mental improvement, by the diffusion of knowledge and the promotion of Christian benevolence.—*Balt. American.*

Mr. Buckingham estimates the loss of labor in England by the use of ardent spirits at $12,000,000.

THE BREEDER & MANAGER.

[From the London Lancet.]

LECTURES ON VETERINARY MEDICINE, *Delivered in the University of London by Mr. Youatt*—Lecture VIII.

GLANDERS CONTINUED.

The Lining Membrane of the Nose the Primary Seat of glanders.—There can be no doubt I think, Gentlemen, of the conclusion to which we must arrive, that the primary seat of glanders is the lining membrane of the nose. A discharge from the nostril is that which causes the disease to be first suspected, which attends it through every period of its course, and accompanies it at its fatal termination. It is inflammation of the pituitary membrane, recognised by that which is the earliest and invariable symptom of inflammation or a mucous surface, increased secretion—secretion altered in character as well as quantity, becoming vitiated, acrimonious, malignant. I will not enter into the controversy whether it be a specific inflammation—one that is not governed by common laws—or whether the malignant and infectious character which it speedily assumes may be traced to the extreme vascularity and sensibility of the membrane, and the absurd and injurious irritation to which it is so much exposed.

The Progress of the Inflammation.—It is inflammation, whether specific or common, of the pituitary membrane—possibly for months, and even for years, confined to that membrane, and even to a portion of it—the health and the usefulness of the animal not in the slightest degree impaired. Then, from some unknown cause, not a new but an intenser action is set up, the inflammation more speedily runs its course, and the membrane becomes ulcerated, and the ulcerations spread on either side, down the septum, and along the pharynx, the larynx, and the treachea. The ulceration spreads through the medium of the absorbents—the superficial absorbents first. The secretion is of so acrimonious a nature, that the vessels through which it passes take on inflammation, and the virus accumulating about the valves of the absorbents, the inflammation runs higher there, and ulceration speedily follows, and assumes that peculiar chancrous form which characterises inflammation of these vessels.

Observe these specimens; see, running along the course of the main trunk of the absorbents of the membrane of the septum, or radiating from it, these distinct and separate ulcerations, and mark the elevated line which connects one with another. The simple increased secretion does not empoison, or even excoriate, the membrane, nor does it produce any constitutional affection while the membrane remains sound; but, ulceration having once commenced, the disease is propagated from part to part, and with more or less rapidity, through the medium of the absorbents, and the whole frame becomes vitiated. This more general and constitutional affection we term *farcy*. When the air-passages and the respiratory organs alone are involved, we denominate it *glanders*.

The Lungs not the Primary Seat of Disease.—It is plain that the lungs are not the primary seat of disease. When they are affected, it is by coninuity of membrane, and by the gradual spread of inflammation and ulceration. In some of the cases which I mentioned in my last lecture, and which were suffered to run their course, the lungs were sound. In the majority of cases the inflammation or disorganisation was confined to the lung corresponding with the nostril whence the discharge had proceeded. When the lungs do seem to participate in the disease, they are comparatively but slightly affected. There are miliary tubercles, but with only slight congestion, and no ulceration. Where vomicæ are found, peripneumony had preceded or accompanied glanders, and was excited by other causes. In latent or invidious glanders there is no poison in the blood, no unhealthy state of the system; every function, is fully and perfectly discharged. Absorption of the fluid discharged from the ulcer must precede the constitutional affection.

I have described the process from inflammation to ulceration, and from that to the empoisonment of the system, as often exceedingly slow; but, as in the other constitutional affections produced through the means of the absorbents, it is sometimes quickened almost beyond belief. If the exciting cause of inflammation in the membranes, has more than usual power, or, from debility or previous irritability, the membrane is predisposed easily and violently to take on inflammatory action, the disease will run its course in four-and-twenty hours; but the same appearances are presented, the same process is clearly marked; the ulcers follow the direction of the absorbents along the septum, and along the membrane generally, and along the treachea to the lungs. It is the same disease, but differing only, yet sometimes strangely differing, in the intensity and rapidity of propagation.

M. Dupuy's notion of Glanders.—M. Dupuy, and after him many of the French veterinarians, entertain a curious notion of the nature of glanders. He calls it "a *tuberculous disease*." He supposes that innumerable small, firm, grey, bodies, miliary tubercles, are formed on the upper part of the septum, or in some of the sinuses, particularly the frontal ones. That for a certain period of time they remain unchanged, and during that time do not in the slightest degree interfere with the health of the animal; nor are there any means of ascertaining their existence, except that by their presence as foreign bodies they so far irritate the membrane on which they grow, as to cause a somewhat increased secretion from that portion of the membrane. They continue in this state an indefinite period of time. He thinks that he has traced their existence for five or six successive years. At length from some unknown cause they become disorganised; they soften and ulcerate, and then we have the chancre of glanders. These chancres sometimes penetrate through the perichondrium and the cartilage, the periosteum and the bone; they discharge a poisonous fluid, a portion of which is absorbed; then the whole frame becomes affected, and the disease may be communicated to others.

This theory is very ingenious, but it is deficient in proof. I am not aware of any English veterinarian who has detected these tubercles; and of one thing I am certain, that if they exist, the disease is contagious long before they disorganise and break.

GENERAL VIEW OF GLANDERS.

Now then, Gentlemen, we can conveniently pause for awhile. We are arrived at a point whence we can command much of the path we have yet to travel. Let us look around us a little, and somewhat retrace our steps. Glanders is inflammation of the Schneiderian membrane, strictly local for a while, and often for a long while, and during its insidious state, and even when the discharge becomes gluey, and sometimes after chancres have appeared, the horse is apparently well. There are hundreds of glandered teams about the country with not a sick horse among them. Do not listen to the accounts which you hear of the glandered horse being necessarily more or less out of condition, or that some deviation from health is necessary to his receiving the infections of glanders. Do not puzzle yourselves with the distinction between "healthy and unhealthy disease," a strange connexion of terms, and as unintelligible as many parts of an otherwise valuable work on glanders. Quit the dangerous yet often fascinating regions of theory, and look beyond the walls of an infirmary, where disease alone is found and lives. Go into practice, examine the stables of the farmer and the postmaster and the waggon proprietor, and more particularly the miserable huts that shelter the barge-horse. These are the very domain of glanders, and many an inhabitant yields to its influence. When the disease has developed itself in all its chancrous malignancy and power, we see enough, and more than enough, of its ravages; but, ere it throws off the mask, although it is in full possession of its victim, where do we find horses so hardy, so healthy, so capable not only of ordinary, but of cruel exertion? I cannot say that glanders, like the rot, improves the condition, but I am sure that often, and for a long while,—for months and even for years,—it does no injury to the general health. The inflammation is purely local, and is only recognised by that invariable accompaniment of inflammation,—increased secretion. Although that secretion is poisonous, and its neighbours fall victims to it, it affects not the animal whence it came. But this continued inflammation at length tells, or other circumstances increase its power and its effect, and the vitality of the tissue is destroyed, and suppuration succeeds; but not that of a healthy character—not that which is connected with reproduction,—it is malignant and destructive from the beginning; but soon another process commences, salutary or destructive, according to circumstances. There are absorbents on every surface; they are found on the surface of the chancres which are beginning to appear; and they take up the fluid which is secreted from the ulcers, and they soon feel its poisonous influence. The absorbents become inflamed and tumid, and, where the virus rests as it were, namely, at the valves, destruction of the part ensues, and the chancres spread in every direction.

Some portion of the venom passes on, and is carried into the circulation, and mixes with the blood, and vitiates the blood. The experiment by Professor Coleman, of the transfusion of a portion of the blood of a glandered horse into a healthy ass, and the transfusion of the disease with it, was satisfactory on this point.

Then comes the constitutional affection. The

membranes in the neighborhood, and those most susceptible of irritation, first yield. Chancres proceed down the pharynx and the larynx, and gradually the ulcers spread over the frame. The acrimonious fluid, mingling with the blood everywhere, begins everywhere to attack that tissue which is most susceptible of its influence, namely, the internal lining membrane of the absorbents; and in the most distant parts of the frame (the hinder extremities are a favourite situation) the absorbents become corded, and tumours appear in the situation of the valves, and ulcerations ensue. First, the superficial lymphatics are affected; then the deeper-seated become involved: the whole frame is empoisoned; farcy is established in its most horrible form, and death speedily closes the scene.

CAUSE OF GLANDERS.

What is the cause of this dreadful malady? Although it may by-and-by prove that we are powerless as to the removal of the disease, yet if we can trace its cause and its manner of action, we may do something in the way of prevention at least. We have been able to accomplish much in this way. Glanders does not commit one-tenth part of the ravages it did thirty or forty years ago, and it is now only found, as a frequent and prevalent disease, where neglect and filth, and want of ventilation exist.

The Character and Office of the Schneiderian Membrane.—Its seat is the Schneiderian membrane; a highly vascular one—a tissue of blood-vessels—a membrane possessed of exquisite sensibility, specific and common, and these mingling together for the perfection of each,—thus vascular and sensitive, placed as a guard to the lungs; covering within and without those convoluted bodies which, in a manner, fill the whole of the nasal cavity, and everwhere expose its mucous surface; intercepting every deleterious substance, and even gas. Comparatively few particles penetrate to the pharynx, or if they do, the sentinel has given warning, and other air-passages take up the action. The rimæ glottidis refuse to admit, or the muscles of respiration unite to expel, the intruder. Little beside pure atmospheric air is destined to reach the lungs, or if the animal is destroyed by some deleterious gas, he dies more from the want of that oxygen which is necessary to the continuance of respiration, than from the actual stimulant or depressive effects of the inspired air.

The Schneiderian membrane is the guard of the lungs, and it arrests every intruder. No part of the frame has a more important function to perform,—no part is endowed with great sensibility,—no part is exposed to so much injury. The currents of air which are continually traversing it; the thousand extraneous bodies which are impinging upon it; the pungent and poisonous vapours which are coming so incessantly in contact with it; all are sources of irritation and debility, and we need not wonder that it is so disposed to inflammation, and that that inflammation will run its course.

Alternations of Temperature.—Besides the injuries to which it is unavoidably exposed, there are others, and far more powerful, artificially and absurdly introduced. I have adverted to them when speaking of coryza. Nothing could be so debilitating or so dispose this membrane to inflammation and all its consequences, as the sudden change of temperature to which this sensitive membrane used to be exposed, in that destructive system of stable management which once everywhere prevailed, and which is still maintained in too many establishments. The heat alone of the stable, without the sudden and excessive change, would wear out the vital power of the membrane, by the constant state of excitement it produces.

Ammoniacal Vapours.—But, worse than this, and more connected with our subject (for these alternations of heat and cold are far more injurious to the lungs than to the membrane of the nose, and dispose more to pneumonia than to glanders), there are the irritating pungent vapours which abound in every heated and closed stable. I have said that the lining membrane of the nostril, and and the conjunctival membrane, are painfully irritated when we breathe but for a few minutes, the atmosphere of these ill-managed stables. The horse breathes there all night and the greater part of the day. The injurious effect of these gases is spent on the pituitary membrane chiefly, or alone with the exception of the eye. By it the ammonia, so plentifully extricated, is arrested and absorbed. If the slightest portion of it reached even the larynx, violent, and so long as the stimulus was applied, incessant cough would be excited. All the mischief which is done is inflicted on the conjunctival and Schneiderian membranes, disposing the one to the specific inflammation of specific ophthalmia, and the other to the inflammation of glanders, or supporting that inflammation when excited. The lungs are comparatively little or not at all affected.

Often-Respired Air and the Vapours of Putrefying Substances.—But there are other changes going on in the air of the closed stable, not so deleterious as some have imagined, nor affecting the constitution in the way that they have described, but sufficiently productive of evil. The often-respired air, and the gases extricated in the putrefactive fermentation of the filth of the closed and neglected stable, are depressive perhaps rather than stimulating—they are productive of low and typhoid diseases rather than of acute ones, and they produce their first, their grand, almost their only effect, on that mucous membrane, among the sinuosities and convolutions of which they wind, and by which too they are arrested and absorbed; or, if the constitution suffers, it is through the medium of this membrane, this frequent, prevailing, but little suspected, inlet of infection and disease. The membrane which we know does arrest the ammoniacal gas, so that scarcely an atom of it reaches the larynx, arrests likewise these deleterious vapours; but it suffers sadly in the discharge of this all-important function, and is disposed for low and typhoid inflammation, degenerating into, or perhaps constituting, glanders. Therefore it is that the foul stable is the very hot-bed, not of pneumonia, but of glanders; for it is the membrane of the nose, far more than that of the lungs, which is exposed to its fatal influence.

On this account is the paramount importance of free ventilation in the stable. We owe every thing here to Professor Coleman. While the cavalry barracks, forty years ago, were continually thinned by this equine pest (and I have heard that in one of the depôts, at the close even of the Peninsular war, several hundreds of horses were condemned in one morning), it is a disease now of comparatively rare occurrence among our troops. Agreeing in the general effect, and thankful for the result of ventilation, I am not disposed to cavil much, even when the principle is pushed to a somewhat extravagent extent. I can understand the good of it with reference to the disease now under consideration.—These gases impinge upon the Schneiderian membrane, and, like the ammoniacal gases of the stable, are arrested and absorbed by it, and have their debilitating effect in the productions of glanders. But when I am told that this want of ventilation is the cause of a rabies in the dog and the rot in sheep, I do wonder a little. That wonder ceases when I consider how prone our best physiologists and pathologists have been to push their favourite theories too far, and that even the immortal Jenner, upon subjects not altogether dissimilar, and having reference to some of our domestic quadrupeds, rode his hobby-horse farther and more wildly.

Comparison of different Stables.—Want of cleanliness and ventilation are the grand sources of glanders; the latter acting to a certain extent; the former far more influential, but deriving its greatest power to injure from an alliance with the latter. No stables used to be closer and hotter than those of gentlemen; they were perfect ovens, and the same foul air was breathed over and over again. There used to be, and there is still, pneumonia often enough, for there was an absurd and ruinous change of temperature; but glanders was was an unfrequent or unknown guest. Why? The fæcal impurities were cleared away as quickly as possible.

The stables of the horse-dealer used to be, and still are, hot enough, in order to put a sleekness upon the coat; and there was and is plenty of catarrh, and catarrhal fever, and pneumonia, but no glanders, for cleanliness was the order of the day.

The farmer's stable was, and continues to be, ill managed and filthy enough; urine and dung accumulate from week to week, until the place is a perfect dunghill; there is no declivity to drain away the urine, no water to wash away the filth; but the same carelessness prevailed every-where—below, around, and above; but the windows were broken, and the roof was any-thing but air-tight, and there was many a cranny in the walls, and the fumes were driven away as fast as they arose.

But the stables of the post-master, and the waggon-proprietor, and the proprietor of the barge-horse,—sometimes almost too low for an ordinary man to stand upright in, too dark for the accumulation of filth to be observed, too far from the master's eye for the stableman to do his duty, and where the fumes of the fæces and the urine are continually arising,—these, I have said, are the very hot-beds of glanders; there it is almost a constant resident.

Glanders is, in a manner, the consequence of stabling the horse. In many parts of the world it is unknown, as in South America and Arabia; and it used to be in Portugal and in Spain, but in the two last, and in North America and in British India, it is now rife enough. Wherever our stabling, with all its absurdity, was introduced, there glanders followed in its train.

THE GARDENER.

[From Bridgeman's Gardener's Assistant.]

On the choice of fruit trees in the nursery.

[Continued from page 279.]

APRICOTS.

1. *Red Masculine, Abricot Precoce, Abricot Hatif Musque, Early Masculine.*—This is an old variety, the fruit of which is small, of a roundish form, and greenish red color; the pulp is tender; the tree a good bearer, and the fruit esteemed for its earliness and tart taste; ripens in July.

2. *Hemskirke.*—Fruit middle sized, roundish, slightly compressed; of a bright yellow color; flesh tender, juicy, with a particularly rich, delicate flavor, resembling that of the Green Gage Plum; ripe in July.

3. *Musch-Musch*—Fruit round; of a deep yellow color; remarkable for the transparency of its pulp, through which the stone is visible; the flesh is very fine and agreeable; ripens in July.

4. *Early Orange, Royal George, Royal Orange.*—The fruit of a medium size, of a deep yellow color, spotted with red or dark purple next the sun; flesh deep orange, succulent and well flavored; not perfectly a freestone; ripens early in August.

5 *Breda, Abricot de Hollande, Amande Aveline, Royal Persian.*—Fruit medium size, of a round form, and deep yellow color; the pulp is soft and juicy; the tree a great bearer, and the fruit, which ripens early in August, is in great esteem.

6. *Brussels.*—Highly esteemed for its productiveness: fruit medium size, inclining to an oval form; of a red color next the sun, covered with numerous dark spots; the flesh is of a greenish yellow color, of a brisk flavor, and not liable to become mealy; ripens in August.

7. *Moorpark, Hanson's, Temple's Dunmore's Breda.*—The tree is of vigorous growth, and extraordinarily productive; the fruit is very large, of a bright gold color, or orange, with dark spots next the sun; flesh orange color, melting and excellent; ripens early in September.

8. *Purple, Alexandrian Apricot, Abricot Angoumois, Abricot Violet, Black Apricot.*—A small, globular, downy fruit, a little oblong; of a pale red color, becoming deep red or purple next the sun; flesh pale red, but orange next the stone; a little acid, but good; ripens in August.

9. *Turkey, Large Turkey.*—A superior Apricot; fruit of a medium size, deep yellow color, with red blotches next the sun; form globular; flesh firm, juicy, rich and excellent; ripe by the end of July.

10. *Peach Apricot, Abricot Peche, Abricot de Nancy, Imperial Ansons.*—This is a first rate fruit; form variable, generally flattened; skin slightly downy; fawn color next the sun, tinged with reddish spots or points; pulp yellow, melting, juice abundant, high flavored and excellent; ripens early in August.

11. *Blotched Leaved Roman, Blotched Leaved Turkey, Variagated Turkey, Abricot Macule.*—Tree vigorous and productive; fruit large size and round form; of a deep yellow color, but the pulp not very juicy; ripens early in August.

12. *Royal, Abricot Royale.*—This fruit is next in size to the Moorpark, rather oval, compressed; of dull yellow color, slightly red; flesh pale orange, firm, juicy, sweet, and highly flavored, with slight acid: ripens early in August.

CHERRIES.

The first 14 varieties are round fruit, the last 16 heart shaped.

1. *Early May, Small Early May.*—This variety is well calculated to be trained in espalier form, being naturally dwarfish. The fruit, which is of small size, is ripe before any other; its taste acid but pleasant, and the skin of a red color.

2. *May Duke.*—Fruit medium size, round, and a red color; it ripens in the beginning of June, and the flesh is a soft and an agreeable acid; the tree a good bearer, and the fruit excellent.

3. *Late Duke, June Duke.*—A cherry of large size; flesh very rich; it ripens in July and lasts long on the tree, improving in its flavor. The tree is of vigorous growth and an abundant bearer.

4. *Ambree, Cerise Ambree.*—A large cherry with a round head, flattened at the opposite end; marbled with red and yellow in the shade, bright red next the sun; flesh white, somewhat transparent, very juicy, sweet, and excellent, ripe in June and July.

5. *Arch Duke, Griotte de Portugal, Portugal Duke.*—A large globular red cherry; like the May Duke, it grows in clusters, but the tree grows more vigorous than that variety; an excellent cherry, and a great bearer; ripe in July.

6. *Belle de Choisy, Cerise de la Palembree, Cerise Doucette.*—A middle sized, roundish fruit, growing in pairs on a forked stalk; skin transparent, red, mottled with amber; flesh amber colored, tender and sweet.

7. *Carnation, Late Spanish, Wax Carnation.*—This fruit, which derives it title from its color, is of a large size; the skin is a yellowish white, beautifully mottled with red; the flesh yellow, rather firm, and of a pleasant taste, but less sweet than many other varieties; the juice is sprightly, and of a pale color. This cherry ripens in July, and is held in high esteem for preserves.

8. *Holman's Duke.*—The branches of this tree are more spreading than the May Duke; the fruit is larger, of equally fine flavor, and ripens about two or three weeks later.

9. *Prince's Duke.*—This cherry was raised in the Flushing Nursery, from the seed of a Carnation cherry. The fruit is of a red color, shaped like that of its parent, and much compressed; very rich and luscious when at perfect maturity, which is in July.

10. *Kentish, Cerisier de Montmorency, Long Stem Montmorency.*—Fruit of a bright red color; ripens in July, and has an agreeable acid flavor; tree a great bearer, and fruit much esteemed when full ripe; the skin is thin of a dark red color.

11. *Short Stem Montmorency, Montmorency a gros fruit, Gros Gobet, Gobet a Courte Queue, Cerise de Valaine, Cerisier Coulard.*—This tree produces abundance of flowers, but the French complain that the fruit does not set well; it is therefore found only in the gardens of those who prefer the fine quality to the quantity of fruit. The cherry is large, flattened at both ends; the skin is of a brilliant red, and not very dark; the flesh is yellowish white, slightly acid, and highly pleasant. This fruit is considered by some as one of the best cultivated; it ripens in July.

12. *Morello, Milan, Cerise du Nord, English Morello.*—The fruit medium sized, round; nearly black when at maturity; tree a great bearer; the fruit will keep late, and is excellent for preserving and for brandy.

13. *Plumbstone Morello.*—A tree of moderate size, of the Duke or Kentish species; a very large, dark, round cherry, nearly black; of a rich acid flavor. The stone is very large, and resembles that of a plum; a native of Virginia, introduced by Wm. Prince, Esq., of the Linnæan Botanic Garden, Flushing.

14. *Waterloo.*—A large, round, dark red fruit, inclining to black at maturity; the flesh is firm, and of an excellent flavor: raised by a daughter of Mr. Knight, and so named from its perfecting its fruit soon after the battle of Waterloo. The tree is of strong but irregular growth.

15. *Gascoign's Bleeding Heart.*—Fruit large, oblong, or heart shaped, of a dark red color; its flesh pretty firm, of a pleasant and fine flavor; ripe in June.

16. *Bigarreau, Graffion, Turkey Bigarreau, White Ox Heart.*—Very large, obtuse, heart shaped, yellowish amber color, but fine red next the sun; flesh firm, white, sweet and well flavored; a beautiful and excellent fruit, not very productive; ripe in June and July.

17. *Black Eagle.*—A cherry of gobular form, and middle size; dark purple, or nearly black; flesh very tender, rich, and of excellent flavor, and ripens early. The tree grows strong and very upright.

18. *Black Heart, Guignier a Fruit Noir.*—Fruit rather large, heart shaped; dark purple, approaching to black at maturity; flesh dark red, tender, of excellent flavor; ripe early in July; tree a good bearer.

19. *Black Tartarian, Black Circassian, Fraser's Black Tartarian Black Russian, Ronald's Large Black Heart, Fraser's Black Heart.*—A very large, heart shaped fruit, of a most superior quality; color dark shining purple, or black; flesh firm, dark red or purple, sweet, and of most excellent flavor. The tree and fruit combine an assemblage of good qualities; an elegant, very rapid growing tree, of great productiveness; very large and beautiful fruit, and excellent quality, ripening in June and July.

20. *White Tartarian, White Transparent Crimea, Fraser's White.*—A beautiful cherry, pale yellow, approaching to an amber next the sun; a much admired fruit, of excellent flavor; a good bearer, ripening early in July. This tree grows vigorous and upright; and is thus readily distinguished from another variety, bearing the same title.

21. *Black Carone, Couronne Coroun.*—This is a large and improved variety of the Black Mazzard, which it resembles in form, color and general properties; the fruit ripens in July; the tree yields plentiful crops.

22. *Herefordshire Black, Late Black Heart.*—Large, black, and heart shaped; a most excellent cherry, and a great bearer; and more valuable for ripening late, when most varieties are gone.

23. *Elkhorn, Black Ox Heart.*—A large cherry, ripening between the Black Heart and the latest varieties; its flesh remarkably hard, and very peculiar; and though not high flavored, it is supposed by some, that from its solid consistence, it may be profitably cultivated, to be transported from a distance to market.

24. *Elton.*—The tree is very vigorous and productive; the fruit is pretty large, heart shaped; pale glossy yellow in the shade, but marbled with bright red next the sun; flesh firm, sweet and rich; ripens early in July.

25. *Florence.*—Large, heart shaped, depressed; of a yellow amber color, marbled with bright red in the shade, bright red next the sun; tolerably firm, juicy, rich and sweet; ripe end of June.

26. *Harrison's Heart, Red Ox Heart.*—A large heart shaped cherry, yellowish or amber color, but light red next the sun; flesh tender and high flavored; ripens early in July.

27. *Knight's Early Black.*—Blossoms early; fruit resembles the Waterloo; of a rich dark hue; its flesh is firm and juicy; it is abundantly sweet, and ripens by the middle of June.

28. *Remington White Heart.*—A moderate sized cherry, of moderate flavor; chiefly valuable for its very late maturity; said to have originated in Rhode Island.

29. *White Heart.*—This cherry ripens immediately after the May Duke; the fruit is of medium size, oblong and heart shaped, the skin is of a fine appearance, being a yellow white on the one side, and tinged with pale red next the sun; the flesh is rather firm, of pleasant flavor, accompanied by a honied sweetness; but the tree bears very indifferently.

30. *Downton.*—A new variety, raised by Mr. Knight. Fruit rather round, inclining to heart shape; of a pale yellow color, sprinkled with minute red spots, and large patches of dull red or maroon; flesh pale amber color, tender and juicy, very sweet and high flavored; ripens early in July.

SCIENTIFIC PRINCIPLES OF TRANSPLANTING.

The removing of growing plants from one part of the garden to another is done for various reasons, and the science of transplanting will consequently depend on the intention of the gardener in the operation. The principal facts to be recollected are, that every plant takes its food by the tips of the root fibres, and that the sap thence carried up into the leaves has much of its water and oxygen carried off by exposure to light, particularly to sunshine. It follows that if part or all of the tips of the root fibres be broken off or bruised, the plant will be kept hungry or starved, just as an animal would be with its mouth much injured or blocked up, while if a plant in such a state is placed in the sunshine, the water and oxygen carried off thereby, will very soon cause it to flag, wither, and die.—*Rennie.*

A Mode of Destroying Ants—A writer by the name of Roughly, some of whose sketches of West India agriculture are republished by Loudon, says, "Poisoning by arsenic is the most expedient mode of getting rid of ants, as the living will feed on the dead, so that the whole nest, (by devouring one another,) are thus killed."

MISCELLANEOUS.

[From the Downing Gazette.]

THE BEST BUTTER.—They had a cattle show, as they call it, out here a few miles to Westbrook two or three weeks ago; but they showed a good many other things besides cattle. 'Twas the annual meeting of the Cumberland Agricultural Society. I wanted to go out and see their rarities, but being it was the day I was getting my paper ready to print I could'nt get time. The committees have published great long lockerum stories about the great crops that were raised and the great cattle and the thousand good things and fine things that they had there, and who got the premiums and so on. I havn't got room in my paper to publish all these things, but there's one of them that I feel bound to notice jest for relation sake.

"The committee on butter, cheese, &c. report, that the premium for the best butter exhibited be awarded to Mrs. Waity Downing of Minot,—$6."

Now, when I read this I jump'd right up and slapt my hands together a half a dozen times, I was so tickled to think Aunt Waity got it. She's one of my aunts that I set a good deal by; she's a sister to aunt Keziah, and there was always a spat between 'em before they were married whenever they churned, about which did the butter up the nicest. I used to think aunt Keziah was rather the slickest in making butter and doing all kinds of cooking, and I guess if she'd sent some butter to the cattle show the committee would have gin her the biggest premium. Howsomever all the women in our family are rather famous for making good butter, and Downingville butter will fetch any time two-cents a pound more than any other butter that's brought to market.

[From the Ohio Farmer.]

WHITE WASH.—As the citizens of our village have, much to their credit, turned their attention to painting and white washing the outside of their buildings, we insert the following in hopes something may be drawn from it to their advantage on the score of utility and economy.

Incombustible Wash and Stucco White Wash.—The basis for both is lime, which must be first slacked with hot water, in a small tub or piggin, and covered, to keep in the steam; it then should be passed in a fluid form, through a fine sieve, to obtain the flower of the lime. It must be put on with a painter's brush—two coats are best for outside work.

First. To make a fluid for the roof, and other parts of wooden houses, to render them incombustible, and coasting for brick, tile, stone work and rough cast, to render them impervious to the water, and give them a durable and handsome appearance. The proportions in each recipe are five gallons. Slack your lime as before directed, say six quarts, into which put one quart of clean rock salt for each gallon of water to be entirely dissolved by boiling, and skimmed clean; then add to the five gallons one pound of alum, half a pound of coppersas, three fourths of a pound of potash—the last to be gradually added; four quarts of fine sand or hard wood ashes must also be added; any coloring matter may be mixed in such quantity as to give it the requisite shade. It will look better than paint, and be as lasting as slate. It must be put on hot. Old shingles must be first cleaned with a stiff broom, when this may be applied. It will stop the small leaks, prevent moss from growing, render them incombustible, and last many years.

Second. To make a brilliant Stucco White Wash for buildings, inside and out. Take clean lumps of well burnt stone lime; slack the same as before; add one fourth of a pound of whiting or burnt alum pulverized, one pound of loaf or other sugar, three pints of rice flour made into a very thin and well boiled paste, starch or jelly, and one pound clean glue, dissolved in the same manner as cabinet makers do. This may be applied cold within doors, but warm outside. It will be more brilliant than plaster of paris, and retain its brilliancy for many years, say from fifty to one hundred. It is superior, nothing equal. The east end of the President's house in Washington is washed with it.

Feather Beds.—The want of feathers is altogether artificial, arising from a disregard of the physical and moral well being of infants and children; and he who has the good fortune never to have been accustomed to a feather bed, will never in health need or desire one, nor in sickness, except in cases of great morbid irritation, or excessive sensibility, or some disease in which the pressure of a firm or elortic substance might occasion pain.—But when a rational regard to the preservation of health shall pervade the community, feathers will no more be used without necessity, or medical advice, than ardent spirits will be swallowed without the same necessity or advice. The physician has frequently occasion to see persons who are heated, sweated, and enfeebled by sleeping on feathers, as if from a fit of sickness, enervated, dispirited, relaxed, and miserable.—*Med. Intel.*

Permanent Ink for marking Linen.—Take of lunar caustic (now called argentum nitratum) one drachm; weak solution, or tincture of galls, two drachms. The cloth must be first wetted with the following liquid, viz. salt of tartar, one ounce; water, one ounce and a half; and must be perfectly dry before any attempt is made to write upon it.

Sore Backs in Horses.—White lead, moistened with milk or sweet oil, has been recommended as the most effective application in the complaint.

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Compliments of the season—Gama Grass—Pedigrees of Dr. Hosack's cattle—The Tennesse Farmer—Ohio Tobacco, bad assorting—The markets and the weather—Sugar from beets—Mode of extracting wax from honey-comb—On the cultivation of Gama Grass—Hog-killing at Cincinnati—Fredericksburg, Va. Agricultural Society—Introduction of Lyceum System—Dr. Youatt's Lecture on Glanders continued—Choice of Fruit Trees—Scientific principles of transplanting—Mode of destroying Ants—Mrs Waity Downing's premium Butter—Incombustible white-wash and stucco white wash—Feather Beds—Permanent Ink for marking linen—Cure for sore backs of horses.

BALTIMORE PRODUCE MARKET.

☞ *These Prices are carefully corrected every* MONDAY.

	PER.	FROM	TO
BEANS, white field,	bushel.	——	3 00
CATTLE, on the hoof,	100lbs.	5 00	6 00
Slaughtered,	"	3 00	4 00
CORN, yellow,	bushel.	60	62
White,	"	60	62
COTTON, Virginia,	pound.	17	——
North Carolina,	"	14	16
Upland,	"	17	18½
FEATHERS,	pound.	35	37
FLAXSEED,	bushel.	1 62	1 70
FLOUR—Best white wheat family,	barrel.	6 00	6 50
Do. do. baker's	"	5 50	6 00
Do. do. Superfine,	"	4 75	5 00
Super Howard street,	"	4 62	4 75
" " wagon price,	"	4 50	——
City Mills, extra,	"	4 87	5 00
Do.	"	4 75	4 87
Susquehanna,	"	5 25	——
Rye,	"	4 00	4 12
GRASS SEEDS, red Clover,	bushel.	5 50	6 00
Timothy (herds of the north)	"	3 00	3 50
Orchard,	"	3 00	3 50
Tall meadow Oat,	"	2 00	2 50
Herds, or red top,	"	1 25	——
HAY, in bulk,	ton.	16 00	——
HEMP, country, dew rotted	pound.	6	7
" water rotted,	"	7	8
HOGS, on the hoof,	100lb.	5 00	——
Slaughtered,	"	5 50	——
HOPS—first sort,	pound.	15	——
second,	"	13	——
refuse,	"	11	——
LIME,	bushel.	30	33
MUSTARD SEED, Domestic,	"	5 00	6 00
OATS,	"	33	35
PEAS, red eye,	bushel.	60	——
Black eye,	"	80	85
Lady,	"	100	——
PLASTER PARIS, in the stone,	ton.	3 12	——
Ground,	barrel.	1 37	——
PALMA CHRISTA BEAN,	bushel.	1 50	1 56
RAGS,	pound.	3	4
RYE,	bushel.	65	68
TOBACCO, crop, common,	100 lbs	4 25	5 00
" brown and red,	"	5 00	7 00
" fine red,	"	7 00	9 00
" wrappery, suitable for segars,	"	6 00	12 00
" yellow and red,	"	8 00	12 00
" yellow,	"	13 00	17 00
" fine yellow,	"	15 00	25 00
Seconds, as in quality,	"	3 50	5 00
" ground leaf,	"	5 00	9 00
Virginia,	"	4 00	——
Rappahannock,	"	——	——
Kentucky,	"	4 00	9 00
WHEAT, white,	bushel.	1 03	1 09
Red,	"	90	95
WHISKEY, 1st pf. in bbls	gallon.	31	32
" in hhds	"	29	——
" wagon price,	"	29	30
WAGON FREIGHTS, to Pittsburgh,	100 lbs	——	1 25
To Wheeling,	"	——	1 50
		washed.	*unwash*
WOOL, Prime & Saxon Fleeces,	pound.	50 *to* 60	24 *to* 26
Full Merino,	"	44 50	22 24
Three fourths Merino,	"	37 44	22 24
One half do.	"	33 37	22 24
Common & one fourth Meri.	"	30 33	20 22
Pulled,	"	31 33	22 24

BALTIMORE PROVISION MARKET.

	PER.	FROM.	TO.
APPLES,	barrel	$3 00	$5 00
BACON, hams, new,	pound.	11	——
Shoulders,	"	8	9
Middlings,	"	——	——
BUTTER, printed, in lbs. & half lbs.	"	25	37
Roll,	"	15	25
CIDER,	barrel	——	——
CALVES, three to six weeks old	each.	3 00	6 00
COWS, new milch,	"	17 00	30 00
Dry,	"	6 00	10 00
CORN MEAL, for family use,	100lbs.	1 50	——
CHOP RYE,	"	1 50	——
EGGS,	dozen.	19	20
FISH, Shad, salted,	barrel.	5 75	6 00
Herrings, salted, No. 1,	"	4 75	——
Mackerel, No. 1, 2 & 3,	"	5 00	7 00
Cod, salted,	cwt	2 50	3 00
LAMBS, alive,	each.	1 25	2 00
Slaughtered,	quart r	31	50
LARD,	pound.	8	9
ONIONS,	bushel.	62	75
POULTRY, Fowls,	dozen.	1 50	2 25
Ducks,	"	——	2 50
POTATOES, Irish,	bushel.	40	62
Sweet,	"	——	——
TURNIPS,	"	37	50
VEAL, fore quarters,	pound.	3½	4
Hind do.	"	6¼	——

ADVERTISEMENTS

TO NURSERY MEN.

1630 Peach Stocks—One year old.
45 do. do.—two years old.
520 Pear do. two do. do.
740 Apple do. two do. do.
For sale cheap. Enquire at this Establishment.
Dec 9.

GRAPE VINES.

HERBEMONT S Madeira, one, two, and three years old, from 25 cents to 75 each.
Isabella, two and three years old, at 25 to 50 cts each.
Catawba, one year old, 25 cts. each.
White Scuppernong, two years old, at 37½ cents each.
Sultana, one year old, at 50 cts. each.
Woodson, two years old, at 37½ cents each.
Red Bland, one year old, at 25 cts. each.
Are for sale at this establishment, and will be well packed to go any distance. no. 25

GAMA GRASS SEED

JUST received, and for sale at this Establishment—Price 50 cents per ounce.

PEA FOWLS.

ONE pair 2 years old, and one pair 3 years old, for sale at this establishment. Price $3 a pair. no 4

AGENCY FOR TREES, &c.

THE subscriber respectfully offers his services to his customers and the public generally, as agent for the procurement of Fruit and other Trees. It may not be generally understood or duly considered, that few nurseries contain *all* kinds of trees in equal perfection. One, for instance, is celebrated for its fine apple trees, another for its peaches, and a third for its plums or pears, while scarce any of them can make up a collection of *all kinds* of trees of the best quality. In this respect the subscriber flatters himself that he possesses peculiar advantages. His own nursery is not extensive or forward enough to afford many trees for sale yet, and his acquaintance with nearly all the most eminent nurserymen in this country, and of the peculiar excellencies of their respective establishments enables him to select from them all, probably a better collection of fruit trees than any one of them can furnish. Trees ordered from any particular nursery, or to be selected by me, will be charged at nursery prices and 10 per cent commission added. Orders ought to be forwarded immediately, and all confided to the subscriber's agency shall receive his best attention.
I. I. HITCHCOCK,

BAKEWELL RAMS.

TWO Bakewell Rams of good size and quality, for sale by a farmer near Baltimore at $20 each. Apply to I. I. HITCHCOCK,

WESTPHALIA GEESE.

A FEW pairs of these very superior Geese are now ready for delivery at 5 dollars a pair. Apply to I. I. HITCHCOCK,
no 18 Amer. Far. Estab.

WHITE TURKIES.

I HAVE now ready for sale several pairs of these truly beautiful fowls, at $5 a pair, they are of this year's crop. I. I. HITCHCOCK,
no 18 American Farmer Establishment.

FRUIT TREES—CHEAP.

An Invoice of fruit trees from a first rate nursery, having been missent, is offered by the owner for sale a at reduced amount. The opportunity is a favorable one for procurring a lot of first rate trees, at a great bargain. The following is a list of the trees which are laid in the ground by the heels so as to continue unhurt till next spring if necessary.

APPLES.
2 Monstrous Pippin.
2 Royal Pearmain.
2 Long Island Russet.
2 Winter Pearmain.
2 Carthouse.
2 Bellflower.
2 Vandevere.
2 Red sweet Vandevere.
2 Michael Henry Pippin.
1 Winesap.
6 York Greening.
7 Red Streak.

PEACHES.
1 Teton de Venus.
4 Malcaton.
1 Lehman's cling.
2 Gough's Cling.
3 Oblong open Peach.
1 Fine Cling.
2 Early Etna.

CHERRIES.
3 Oxheart
3 York Duke
3 Tartarian
3 Red heart
3 Bleeding do
2 Morrello
1 Orleans.
2 May Duke.

QUINCES.
1 Portugal.
1 Orange.

The Invoice including packing mats, &c. amounts to $30, and the whole will be sold for $20, which may be sent to I. I. HITCHCOCK.
Amer. Farm. Estab.

MORUS MULTICAULIS.

THE subscriber has on hand a few hundred of this celebrated Tree, unrivalled in the quality of its leaves as food for the silk worm, for which he is ready to receive orders (accompanied by the cash) with *particular* directions for the delivery of the trees on or after the first of Nov. next. Price 50 cents each, $5 per dozen, or $40 per hundred.

The success and ease with which this tree is propagated, the extraordinary quickness of its growth, the superiority of its leaves over *all* others for the silk culture, and its uncommon luxuriance and beauty, altogether recommend it to the favourable notice of *every farmer* as a most valuable acquisition. I. I. HITCHCOCK,
aug. 26 Amer. Far. Estab.

TERMS OF THIS PAPER.

1. Price five dollars per annum, payable in advance. ☞ When this is done, 50 cents worth of any kind of seeds on hand will be delivered or sent to the order of the subscriber with his receipt.

2. The *manner* of payment which is preferable to any other for distant subscribers, is by check or draft on some responsible party here, or else by remittance of a current bank note; and to obviate all objection to mail transmission, *the conductor assumes the risk.*

3. Subscriptions are always charged BY THE YEAR, and never for a shorter term. When once sent to a subscriber the paper will not be discontinued (except at the discretion of the publisher) without a special order, on receipt of which, a discontinuance will be entered, to take effect AT THE END of the current year of subscription.

4. Subscribers may receive the work either by mail in weekly numbers, or in monthly or quarterly portions; or else in a volume (ending in May annually), handsomely pressed, half bound and lettered (to match with the American Farmer) by such conveyance as they may direct: but the $5 must in all these cases be paid in advance.

☞ ADVERTISEMENTS relating to any of the subjects of this paper will be inserted once at one dollar per square, or at that rate for more than a square, and at half that rate for each repetition.

THE FARMER & GARDENER;

AND LIVE-STOCK BREEDER & MANAGER.

CONDUCTED BY I. IRVINE HITCHCOCK, AND ISSUED EVERY TUESDAY FROM THE AMERICAN FARMER ESTABLISHMENT, AT $5 PER ANNUM, IN ADVANCE

No. 37. **BALTIMORE, JANUARY 13, 1835.** **Vol. I**

☞This publication is the *successor* of the late
AMERICAN FARMER,
(which is discontinued,) and is published at the same office, at five dollars per year, payable in advance.
☞When this is done, 50 cents worth of any kind of seeds on hand will be delivered or sent to the order of the subscriber with his receipt.

American Farmer Establishment.

BALTIMORE: TUESDAY, JANUARY 13, 1835.

DIED, at his residence at Orange Farm, 3 miles from Baltimore, on the 6th inst. *Noah Underwood*, aged 53. Mr. Underwood, as the conductor of this celebrated establishment, had within a few years past been visited by very many gentlemen from all parts of the Union, by whom his urbanity and frankness in communicating his observations and the results of his ample experience will be long and respectfully remembered.

☞We respectfully request the reader's attention to our advertisement and card on the last page of this number. If any of those editors with whom we exchange will lend us a hand in making known to his readers our wishes there expressed, he will confer a favor on

A WEARY BROTHER.

NEW POTATOES—We were shewn last week a quart or two of new potatoes, just out of their *warm bed*. They were raised by the gardener of Col. B. C. Howard, and have come to their present state from the planting within the last seven weeks. One of them now before us is about an inch in diameter. They are of the kind called in our catalogue "earliest white."

TEST OF THE QUALITY OF MILK.—The quality of milk is a subject of vast importance to dairymen, and yet they seem not generally to be attentive to it. Every one may easily try it, if not with *perfect* exactness, yet very satisfactorily by the following means. Take several Cologne bottles, or any other very deep vials, and fill them with the milk of different cows, and let it stand long enough for the cream all to rise. The thickness of the cream, which will be apparent, will indicate the quality of the milk from which it rises. This operation should be repeated a sufficient number of times to establish the relative richness of each cow's milk, which taken in connexion with the quantity she gives in the year, will establish her character as a milker.

"BOOK FARMING," VIEWED IN ITS TRUE LIGHT.—We extract the following remarks from an excellent paper, written by Mr. Willis Gaylord, and published in the Genesee Farmer, and commend them to the attention of all sneerers at *book farming*.

"Next in benefit to Agricultural Societies, and in a great measure springing from them, is to be placed the influence of Agricultural Journals. While their beneficial effects have been almost unlimited, they have injured no one, and now that their utility has been fully tested by experience, that farmer is guilty of an unpardonable inattention to his true interests who neglects to provide himself with a well conducted Journal of this kind. I am sensible there is a prejudice, an inveterate, but most unfounded and untenable prejudice, against what is termed by some of our cultivators, book farming. With such men it is enough to condemn any proposition, or discredit any statement, that it comes from a book or a Journal. They reason thus;—our fathers for a century have been content with thirty bushels of corn, or ten bushels of wheat to an acre, and why should we undertake to be wiser than they? They never heard of a chemical analysis of soils, of turnip culture, of rotation in crops, and agricultural books, and why should we bother our heads about such matters? With such reasonings thousands resist all improvement, and rest contented in an ignorance not the less prejudicial because so shamefully prevalent. And what is this book farming, about which such unreasonable notions prevail? A few cultivators of the earth agree to communicate to each other the results of their experience in farming—raising cattle, sheep and hogs—the best modes of preparing and using manure—the most profitable crops and the best modes of raising them—the best breeds and the best modes of fattening animals, and in short all things of general interest relating to the occupation of a farmer. These results are committed to writing, go through the press, and become a book. He who chooses to follow the results of enlightened experience as there detailed, is guilty of book farming. A gentleman who has money, inclination and leisure, following nature as a guide, commences a series of agricultural experiments which result in doubling the means of existence from a given quantity of land, or in other words makes two blades of grass, or two bushels of wheat, grow where but one grew before. Such a man is a benefactor to his country; but, if actuated by a noble regard for the general good, and anxious that all should partake with him in the benefit, he sends a history of his proceedings to a journal, that others may avoid his errors, it is denounced as a mere whim, as nothing but book farming. No matter how important or how valuable the published accounts may be, if they add one half to the productiveness of a farm, there are many, too many, who scout them as unworthy of notice. If however we were required to point out the men who had done the most to advance the agricultural interests of the state or country, who have introduced the most successful methods of raising crops, and improving the soil, we should be obliged to fix on those who are emphatically book farmers; men who were bred to other pursuits, but have relinquished them for the safe, honorable, and in their case eminently successful cultivation of the soil. It is to such men as Powell, Colman, Buel, Bradley, and the lamented Thomas, that the farmer who wishes to adopt the easiest and most profitable course of farming must look as guides, and these are the most thorough book farmers in the country. It is time that this unworthy prejudice against that knowledge of farming which may be derived from books was done away—that farmers should not deem themselves so far advanced towards perfection in their pursuits as to be beyond the teachings of recorded experience. We know there are visionaries in agriculture, as well as in every thing else, men who are mere theorists, who from their studies put forth their vague notions and crude ideas as facts, without submitting them to the ordeal of experiment, the test of time. But the practical, well informed farmer, and such all should be, is not deceived by such fantasies; from the premises laid down, and comparing them with his own experience, he perceives the absurdities to which they lead, and rejects them without hesitation. But the theoretical farmer, who with time, and money, and nature for his guide, submits his ideas to the test of experiment, may obtain results astonishing to himself, and which when laid before the public demand its lasting gratitude. To books then we must continue to look for practical instruction in the most approved modes of agriculture. A Journal is a reservoir in which is accumulated the experience of ages and the practice of thousands; and to it the young farmer may profitably go for information on a multitude of topics respecting which the experienced and the uninformed must necessarily be ignorant. To all then who aspire to the honorable title of an intelligent tiller of the soil, we say, take some standard agricultural work—to every present subscriber to the Farmer we say, not only continue your subscription and endeavor to promote its circulation among your neighbors, but become a contributor to its columns of the results of your farming experience, your success and your failures—preserve the numbers carefully, and see when each volume closes they are well bound—read carefully, compare thoroughly, reduce your knowledge to practice, and you will be singularly unfortunate indeed, if you do not find yourself remunerated tenfold."

THE FARMER.

From the American Farmer.

Tobacco.

Extracts from a Circular of B. J. Harris, commission merchant at New Orleans, to the Tobacco Planters of Kentucky, Tennessee, Missouri, and the Western States generally—with notes by the Editor of the American Farmer.

As you inhabit countries and cultivate lands, where the climate and soil are as congenial to the production of tobacco, as any part of the United States, and competent to make the same kinds, and of as good and valuable qualities, as ever were made in Virginia, I beg leave to submit to your consideration, the causes why your best crops have not commanded as high prices here or in Europe, as the best Virginia crops.

I will candidly premise, that I think much may be attributed to partiality for the one, and prejudice against the other; but much more is owing to the western neglect, and bad management. The small number of your fine crops, does not command sufficient competition here, nor is your late improvement extensive enough as yet to remove prejudices here or abroad, which must be eradicated by degrees, after making a greater quantity of fine to act upon for several years, in the way of competition.

The good and neat management of Virginia, (if adopted in the western states,) would, in a few years, enlist the partiality of most of the tobacco merchants, in place of prejudice, in favour of the western states.

As the want of good management is the chief cause of the present difference in price between Virginia and western tobacco, and the first step towards reformation and improvement is, to be convinced of error, may I be permitted to point out those which have come within my knowledge, and suggest such remedies and amendments as I have discovered from experience and observation.

Topping.

One the greatest errors in the culture of tobacco in the western states, has been that of permitting it to grow too fast, too large and coarse, and ripen too soon; which caused it to be too thin, spongy and wanting in substance, *stamina* texture, and fine flavour. The over-quick, rapid growth, and ripening too early, is the result of your lively, active and very rich soil, and kind mild climate upon too *few leaves* left at topping; an error still remaining in Virginia.

The remedy to produce about an equal quantity, and much better quality, will be found in topping and priming higher and turning out more leaves; the number should be in proportion to the activity and fertility of the land; say 15 to 16 leaves where you are in the habit of leaving 12. This will cause the leaves to be smaller, and of finer, richer and better texture: because, the higher it is topped in reason, the slower and longer time it will be growing; and although the leaves will be smaller, you will make about the same weight, as the number will be greater, and the leaves thus elevated from the ground, by high topping and high priming, will cause them to be cleaner—the leaves will be richer, because they will be longer growing, and receive more benefit from the sun, in consequence of being smaller, and shading each other less than when larger. When topped high, the leaves branch off from the stalk further apart,* which is another cause why they get more benefit from the sun, so necessary to the enriching and perfecting of all vegetation.

Cutting.

Very great errors have often been committed in cutting before it got entirely and perfectly ripe. The loss is great from this cause. Only a few days premature cutting, will lessen the value 25 to 50 per cent., and sometimes more. The defects by it are: lacking of substance, and the curtail of weight, absence of fine flavour, want of strong elastic texture, and every fine essential constituent, most of which are generated and combined in the latter and last stages of the growth, ripening and perfecting.

As tobacco is an aromatic plant, whose ordours are most fragrant from being fully ripe, and a material part of its value depends upon the flavor, too much attention cannot be paid in selecting the ripe, *very ripe* plants for the knife, in the true Virginia style, instead of slaying a field at once; some ripe, some three-fourths ripe, and a part only half ripe; according to the Kentucky custom, which I have witnessed with feelings of regret and astonishment.†

Curing.

Another great error consists in curing. All rich, ripe plants, should be cured of a bright, lively color, which improves it very much in flavour.‡ To be able to cure it of such an appearance, it must be ripe and rich; possessing the wax, oil and stamina, or in attempting to give it the proper colour, it will fade in the process, and come out a sickly looking yellow if checked in the early stage, or a dark dingy brown, nearly black—and be worse and of less value than if permitted to remain in its original dark, dingy, natural colour, which is the general and very objectionable colour of the greater part made in the western country.§

Many of you, knowing that two processes that will produce the favourite colour, which are hard to describe, I need not attempt it, lest I may not be understood. And as the chief cause of bad curing in the western states, is owing to indifferent, leaky, open houses, generally log-houses, open between the logs, I cannot too strongly urge the propriety and necessity of close, tight houses, with many windows to open and shut at pleasure; to have a good command of the weather, and avoid much use of fire and smoke, which engenders a bitter taste and bad flavour, that never can be entirely eradicated. The smoke is very objectionable for every purpose and in all markets.

The method for kiln-drying plank, at saw-mills, is a cheap and excellent plan for curing and maturing tobacco, after it gets to the close-house. This plan excludes the smoke and greatly lessens the danger from fire. It is simply by cutting a ditch through the tobacco-house floor, and covering it with thin slabs of stone, or arching it with brick, and making a fire in the lowest end of the ditch—the smoke and heat will pass through to the other end, and enough heat will rise up in the close-house for the purpose of drying, curing and maturing.

As you understand the terms coming and going, (moistening and drying) from the atmosphere, respecting the curing, I will advise without entering into their minute explanation, that you cause it to come and go very often, which will improve it very much in flavour, and should be accomplished before striking, taking down, stripping, and tying up into bundles.

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* How can that be? Have not all the leaves "branched off" before the operation of "topping" is performed? The leaves will doubtless be larger and thicker, or the reverse, according as the plant is topped, low or high.

† In Maryland, where the matter is as well understood as any where, the practice is for the most experienced to go through the field, row by row, selecting and splitting down to near the root, the ripe plants, and then the cutters follow; leaving those not ripe enough to remain for a subsequent cutting. Tobacco split in this way, is afterwards *straddled*, bottom upwards, upon sticks to be hung up. The *tobacco* ripens so unevenly, that to cut "fore and aft," would embrace a portion too green; or if left until all was ripe, a large proportion would be too ripe.

‡ The writer might as well say that all tobacco should be sold for a high price. How are you to insure a "bright lively colour?" that is the question; for though much undoubtedly depends on management, the *soil* is known to have an influence that no management can control. It is very certain that by cutting in a green state, and by curing and handling injudiciously, even new hilly hickory and dogwood land, will not give tobacco of a bright lively colour; yet it is no less true, that the most skilful culture and after-management of this plant, when produced upon old, or upon low, rich, or highly manured land, will not insure a bright lively colour. Indian corn is, perhaps, influenced more by climate; but it is doubtful whether *soil* exercises over any thing, even wheat, more unmanageable influence, than over tobacco—and we know that the Washington white wheat of the Eastern Shore of Maryland will not long retain its character, even in an opposite county ten miles distant, across the Chesapeake. After all, we do not mean to say that bad management will not *every where* be attended with mischief, nor that the greatest disadvantages may not be mitigated by care and skilful attention.

§ There is a confusion in this paragraph which forces upon us the apprehension that the writer has not been himself a *practical cultivator*, and though neither have we, we have approached it so nearly as to have been required during the period of school boyhood, on Saturdays, to drop and plant—to command an army of turkeys against an army of worms of superior number—to top and heap the plants in the field when cut, and to straddle it on the sticks. We have often compounded to strip a hundred pounds a day rather than walk three miles to school of a cloudy morning; and sometimes been forced, not without murmuring and a sense of encroachment on our rights, to work a little on *Saturdays*, for *these* were never too cloudy to shoot squirrels and hunt rabbits.

What means the writer by tobacco of bright lively colour alone "possessing wax, oil and stamina?" Does not the dark, heavy, rich tobacco of Virginia possess wax, oil and stamina?

The improvement in curing by often coming and going, should be done without moulding in the stem or the leaf, which is an easy performance with close tight houses, and fires in all damp weather. This high curing tends very much to preservation, as well as fine flavour, and prevents hard sweating, which is too severe an operation in all humid climates and long summers.

The same mode of curing is applicable to Maryland and Ohio, as Virginia, Kentucky and the other western states.

ASSORTING.

The fourth great error is very general, and extremely injurious, and of easy remedy. That of putting fine with good and inferior, in the same bundle and in the same hogshead, all mixed together. This causes almost a sacrifice to the fine and the good, because the inferior will injure, and I might say, damage and almost destroy the fine and the good, by being in contact with each other, during the natural process of sweating, which is an ordeal that it undergoes in this warm and humid *damp* climate, with much greater severity than in Virginia, where the atmosphere is much drier, and the summer's heat of shorter duration than in this place, and the western states generally.

However good his crop may be, no planter, in assorting, should make less than three grades or qualities, and four would in general be much better.

If a plant be ripe, *in perfect ripe order*, and not washed by any recent rains before cut, the four top leaves will be much the richest, smallest and finest texture, best flavour and finest colour, and when cured perfectly, will be much the most valuable; but this is not yet admitted by more than two-thirds of the Virginia planters, who are of rapidly acknowledging the truth and correctness of the above remarks, and reducing them to ...able practice. These four top leaves should form the first class—the next three or four, the second; and all but the ground leaves, the third; and the ground leaves and all other inferior from various causes, should constitute the fourth and last class.

ORDER.

The crops of the western states have generally been put up in such soft, humid, *damp* order, that they have become proverbial for that fault, all over Europe and our eastern markets, wherever it has found its way into use and consumption; and of all the climates known to the writer, this is the severest on tobacco; hence the greater necessity of attending strictly to dry order, so important for the preservation.

No experienced good planter, having a proper regard to the ultimate order and value of his tobacco, will ever strike it going out of order, or handle it in cold or cool weather, when it is impossible to manage it to the best advantage.

For stripping or pressing in hogsheads, it should be struck and taken down in mild, warm weather, when it begins to come in order, so soon as the leaf begins to soften and yield to the pressure and grasp of the hand without crumbling, while the largest fibres and stems remain dry and brittle. Bulked in this order, in damp, mild weather, the stems will imbibe a part of the moisture from the leaf, and some from the surrounding atmosphere, and gradually yield to weight and pressure, without breaking, and only cracking partially, which is no disadvantage. Hogsheads made of green or damp wood, will damage the tobacco very much if pressed in them in that order, and the acid of the wood injures more than the moisture. From this cause alone, I have often seen thrown off from the heads, and cut from the sides, 150 to 200 lbs. a hogshead. The loss to the planter is not only in the deduction of weight, but the reduction in price for the disfigured, mutilated remnant of a hogshead, is the natural, practical and certain consequence in every market.

PACKING AND PRESSING.

The order has been already mentioned. In packing, the leaves, which ought never to exceed five to a bundle,* should be arranged parallel with each other, and the bundles laid or packed in the hogshead parallel with one another, in the Virginia style, and not tangled across each other, according to the Kentucky custom, which is not universal, but too generally in that and the other western states. But in justice, without flattering, I can with pleasure say, that I have seen many crops from Kentucky and other western states, previous to and since my short residence here, very properly and elegantly managed, some of them by planters who were neither Virginians nor their descendants; which proves that it neither requires Virginians nor Virginia land exclusively, to produce that which will command the highest prices at home and abroad.

As evidence conclusive, that the western states and planters are capable of making tobacco that will command as high prices as the Virginia planters can make in their state, I will inform you that many shipments of Kentucky tobacco have been made from Richmond, in Virginia, with Virginia tobacco, to Great Britain, when and where the Kentucky tobacco was taken for Virginia, and sold equally as high, and the difference has never been known by the consignee, manufacturer nor consumer. The fact is, that Virginia, Kentucky and Missouri, all lie in the same range of latitude, and have similar climates, soil and inhabitants, and nothing but the superiority of soil in the western states, has caused an inferiority of quality, partly owing to the too rank, large, quick and coarse growth, but chiefly to bad preparations and neglect in management, where it has been much easier to make a good living. But those who wish to aspire to more by the culture of tobacco, will find their account, with compound interest, in better management.

If you will manage your tobacco generally, as well as it has been in Virginia, and to a small extent in Kentucky, Tennessee and Missouri, I will venture to predict, that you will soon eradicate prejudice at home and abroad, and in its place implant that partiality which I have attempted to demonstrate as practicable and easy.

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* Where the leaves are so large as not to admit more than five to a bundle, we should suppose they could hardly be of bright lively colour. Do *great weight to the acre*, and a fine yellow colour, ever go together?

By the preceding notes we do not wish to disparage the valuable hints contained in the circular of Mr. Harris, for which we are indebted to one of the first mercantile houses in this city.

But as this valuable article undergoes many neglects, injuries and abuses *here*, in the various practices and regulations, which originated, perhaps, and probable, in the early state of the trade, under the Spanish government, which, by degrees, have settled down into customs and almost laws —all beyond your management, alteration or control: such as inspecting it by breaking each hogshead in two or three places, and not sufficiently closing the apertures of the breaks, by pressing or screwing down the heads in the Virginia style, to exclude the air, which causes it to mould in the breaks. The mould thus engendered, continues to spread its deleterious influence so far as to injure from a third to a half the tobacco, in many instances; and from this cause alone, lessens the value from a fourth to a third; and it has frequently happened that 50, 100 or 150 pounds per hogshead, and sometimes more, has been thrown off for the purpose of getting in the heads to line them out, which has swelled up by the expanding of the tobacco when standing open, instead of screwing or pressing it down to line out as it was before inspected. This throwing off to get the heads in to line out, is a very common practice, and the tobacco thus thrown off generally sells at a reduced price; but the loss by the reduction in price, and the injury from the mould in the breaks, are not the only injuries and losses sustained by the throwing off instead of pressing it down. The rising up from elasticity when open, for inspection, or sampling, and not closing by pressure, lets in the air to a sufficient degree in every part to invite and cause a mould throughout, sufficient to injure many hogsheads, fifty per cent., and some to a greater extent when the quality was fine.

But of all the injuries which your good and fine undergoes after you put it properly in the hogshead, is that which arises in this place from storing and stowing it in close houses near the ground, where it has not a sufficient free circulation of the air.

This alluvial country is formed from encroachment upon the ocean, by the rich deposit of vegetable and other matter, the alluvial washings of the great rivers from the upper countries, and the earth exudes, exhales and evaporates in warm weather, a peculiar deleterious vapour, which the attractive power of the tobacco imbibes, when so near the ground in these close houses of confined air, as to give the tobacco an uncommon bad flavour, by which the *New Orleans* tobacco is generally known nearly all over the world, and is incorrectly and innocently called the *Kentucky* flavor—which never originated in that country, with any except such as may have been exposed to the same cause, on river bottoms, which seldom, if ever, happened, as you generally send your tobacco to this place before the great exuding season of warm weather.

When the good and fine tobacco from the western states, has been carried to Richmond or Europe early, and before it acquired the *Orleans* flavour, by lying here in warm weather, no one in either country could distinguish it from good and fine Virginia tobacco; and as the chief value of your good and fine depends upon flavour, the *Orleans* flavour injures their value 25 to 40 per cent. and sometimes more, particularly when it lies here during the summer. B. J. HARRIS.

THE BREEDER & MANAGER.

[From the London Lancet.]

LECTURES ON VETERINARY MEDICINE,
Delivered in the University of London by Mr. Youatt—Lecture IX.

THE CAUSES OF GLANDERS CONTINUED.—WANT OF EXERCISE.—PRIVATIONS.—FRACTURE OF THE NASAL BONES.—PREVIOUS DISEASES OF ALMOST EVERY CHARACTER.—HEREDITARY PREDISPOSITION.—ATMOSPHERIC INFLUENCE. MOISTURE.—CONTAGION.

Want of regular Exercise.—This is a frequent, although unsuspected, predisposing cause of glanders, as it is of almost every disease to which the horse is subject. Mr. Turner has well explained this in his valuable account of the navicular disease. He does not attribute the inflammation of the synovial membrane, and consequent injury and disorganization of the joint, to honest wear and tear upon the road. It has its real origin in rest. The predisposition for it is engendered in the stable, although it becomes permanently established by violence out of the stable. So, when a horse is irregularly worked, and, more particularly, worked with unusual severity, and is become out of spirits, and falls away in flesh, a holiday is given him; he stands idle for three or four days, or a week, until he begins to look more lively, and has considerably improved apparently in condition. He is then suddenly taken out of the stable, he is put to his former hard work, and perhaps the owner wishes to make up a little for lost time; but his muscles have got out of the habit of action, and there is too much interstitial deposit between their fibres, and it requires a vast deal more exertion of nervous energy, and more actual labour, to accomplish his wonted task; and when it is accomplished, and he reaches his stable once more, he hangs his head, and stands with eyes half closed, and refuses to eat; he is, in fact, in a state of fever. The groom, however, attributes this to debility, and instead of the slight bleeding, and the mash, and the tepid water, and the hand-rubbing, which would presently set all right again, he crams him with cordials; he adds fuel to fire; he aggravates the state of fever; and this state of general fever very soon has a local determination—so rapidly indeed, in the majority of cases, that some have denied the existence of pure fever in the horse. The weakest then goes to the wall; and either the lungs or the feet, or this membrane, almost the weakest part of all, exposed day after day to the stimulating, debilitating influence of which I have spoken in a former lecture,—the membrane of the nose—becomes the principal seat of inflammation, which terminates in glanders.

Severe Exertion.—It is in this way that glanders has so frequently been known to follow a hard day's chase. The seeds of the disease may have previously existed; its progress may have been hastened by the general and febrile action excited, the consequence of over-work for which the horse was not prepared, and also by the absurd measures which were adopted, not calculated to subdue the fever, but to increase the stimulus.

Every exciting Cause of Disease.—So it is, partly from the natural sensibility of the membrane and the important function it is constantly performing, and the injury to which it is absurdly subjected, that there is scarcely an exciting cause of disease that does not exert its chief, its worst, influence on this membrane. Horses exposed to long-continued privations become glandered. At the close of a severe campaign the cavalry is more than decimated by this pest. At the termination of the Peninsular war, the ravages of this disease were dreadful. It is easy to conceive that any thing that directly irritates the Schneiderian membrane may be a cause of glanders. I have stated that it is frequently the result of fracture of the nasal bones, and warned you to give a very guarded prognosis when a fracture of these bones, or any injury to the nasal cavity, occurs.

Every previous Disease.—It is easy to conceive why various affections of the respiratory passages, I must not say run on to glanders, but, predispose the Schneiderian membrane to take on the peculiar inflammation of glanders; and that it should be the sequela of strangles, and catarrh, and bronchitis, and pneumonia. There is continuity of membrane, and association of function, and a thousand sympathies. Of catarrh, however, I would say that we probably may be liable to considerable error. That which we consider to be catarrh may in fact be glanders under its insidious form; appearing, intermitting, returning, now under a more threatening, and then scarcely recognisable, form, until at length it assumes its true and undeniable character; the glands also enlarging, and diminishing, and almost disappearing, and then as prominent and hard as before, playing about the inner surface of the lower jaw-bone, as if desirous, yet fearful of adhering to it. All this I can easily comprehend, but I must have it beaten into me by experience, that pleurisy, and hepatitis, and fistulous withers, and mange, and inflammation of the testicle, and fracture of the sacrum (I am narrating from my own experience), and epidemic catarrh (and that within a few days of the present time), and quittor, and founder, and grease, shall terminate in glanders. My revered friend Mr. John Percival castrated a three-year-old colt; the wound did not take on a healthy character, and on the seventh day pimples began to appear in a connected chain, running from behind the stifle towards the posterior extremity of the buttock. The next day they assumed the form of buds, and there was between them the connecting corded absorbent. On the 10th day similar swellings appeared on the other thigh. On the following day considerable discharge appeared from the nose; the chancres of glanders were evidently to be seen, and the colt was destroyed on the 26th day, decidedly farcied and glandered. How is all this? Is this the natural termination of almost every disease of the horse? No: for as I have already observed, there are many countries where glanders is unknown. It is the consequence of our preposterous treatment of the horse—of that injurious stimulus, and consequent debility, and predisposition to take on any and every morbid action to which we have exposed this vascular and sensitive membrane. I am happy here to be able to agree with Mr. Vines; there is not a disease which may not lay the foundation for glanders: I must not say, which may become the cause of glanders, but which may dispose this delicate, abused membrane to take on this peculiar inflammatory action from causes that would otherwise be harmless and ineffective. Weeks, and months, and years, may intervene between the predisposing cause and the actual evil, but at length the whole frame may become excited or debilitated in many a way, and then this most debilitated portion of it first yields to the attack. The truth is that this membrane, from its vascularity and its sensibility, is always disposed enough to take on inflammatory action, and it only wants a little of our unnatural treatment of the horse, to render it the certain, ultimate, victim, whatever be the part primarily attacked.

Hereditary Predisposition.—There is one cause of glanders that has not been sufficiently estimated—hereditary predisposition. This is a doctrine stoutly denied I know by some, to whom I should be disposed to yield much deference. It has been but lately admitted by any; but, once admitted, it is gaining new advocates every day. There is scarcely a disease that does not "run in the stock." Human surgeons have long admitted this, and veterinary surgeons in spite of old prepossessions are compelled to yield their consent. It is useless to quibble about terms, but there is that in the structure of various parts, or their disposition to be affected by certain influences, which perpetuates in the offspring the diseases of the sire, and contraction, ophthalmia, roaring, are decidedly hereditary: and so in glanders. This is a very important subject for consideration. It concerns us in our practice. It much more concerns our employers, and we should endeavour to convince them that it does. M. Dupuy relates some decisive cases. A mare on dissection exhibited every appearance of glanders; her filly, who resembled her in form, and in her vicious propensities, died glandered at four years and a half old. A second and a third mare, and their foals, presented the fatal proof that glanders is hereditary. I may be told that it is possible that these three foals might have contracted the malady from the same unknown causes to which the dam owed her disorder. I have nothing to do with mere possibilities. A thousand dreams, wild as imagination ever created, may be possible; but when I have three foals dying of the disease by which their dams were destroyed, and one of them evidently inheriting the form and character of the dam, I see the strong probability of an hereditary predisposition, and, coupling this with the fact that Tipperary was overrun with the blind progeny of Chanticleer, and that it took many years to eradicate the roaring with which Major Wilson's horse had infected the best breeds of the country, the probability assumes almost the form of certainty.

Atmospheric Influence.—This has much to do with the prevalence of glanders. It is not so frequent in summer as in winter. There is perhaps a reason for this, independent of atmospheric influence; the animal is not exposed to the same exciting causes from our absurd treatment. The stable is not so close nor so foul, and the alternation of temperature is not so violent.

Moisture in various Forms.—It is not so prevalent in a dry winter as in a moist one. Moisture has much to do with the existence and the

spread of almost every epidemic or contagious disease. It is necessary to the decomposition of every animal and vegetable substance, and it seems necessary likewise to give deleterious influence to the gases extricated in that decomposition.

There are several remarkable cases of the connexion of moisture, or moist exhalations, with the prevalence of glanders. When new stabling was built for the troops at Hythe, and inhabited before the walls were perfectly dry, many of the horses that had been removed from an open, dry, and healthy situation, became affected with glanders. Some time having passed over, the stables were healthy enough, and the disease entirely ceased.

An innkeeper at Wakefield built some extensive stabling for his horses; and, inhabiting them too soon, he lost a great proportion of his cattle from glanders. There are not now more healthy stables in the place. The immense range of stables under the Adelphi in the Strand, where light never enters, and the supply of fresh air is not too abundant, were for a long while notoriously unhealthy, and many valuable horses were destroyed by glanders, but now they are filled by the finest waggon horses that the metropolis or the country contains, and they are fully as healthy as the majority of stables. In a French journal an account is given of one of the French cavalry regiments. It was in a low damp situation, and the stables were damp; and they lost in that year thirty-one horses from glanders. Their quarters were then shifted to a drier situation and better-constructed stables, and one only was destroyed in that year.

The Influence of Age.—Age seems likewise materially to influence the developement of glanders. Except in cases where the foal has sucked a glandered mare, there appears to be an almost perfect immunity until the animal is three years old. It is true that the horse can scarcely be said to be exposed to the usual exciting causes of this disease, until he has arrived at that age; and he is comparatively exempt from the influence of contaminated air, or sudden alternations of temperature. From that period, until he is five years old, he is not often attacked by this fatal disease, for, although he is more exposed to danger, neither his frame generally, nor the membrane of the nose in particular, is much debilitated or disposed to take on inflammatory action. After that period the disease much more frequently appears.

In a record of 134 horses that died of glanders in a cavalry regiment, the following is the singular result. It should however be previously stated, that the majority, or almost all of them, are admitted considerably under five years old, and that many are smuggled in when they are not much above three. Under five years old only five died —from five to six, sixteen—from six to seven, thirty-one—from seven to eight, twenty-seven—from eight to nine, twenty-seven—from nine to ten, eighteen—and above ten, seven. The greater number perished from six to ten, and they which had sufficient strength of constitution to repel the fatal influence by which they were surrounded until they were ten years old, had been completely seasoned, and could not be killed by any-thing. A great deal of instruction will be derived from a comparison of the earlier ages, and which your reflections cannot fail of suggesting to you.

THE GARDENER.

[From Bridgeman's Gardener's Assistant.]

ON THE CHOICE OF FRUIT TREES IN THE NURSERY.

[Continued from page 287.]

NECTARINES.

The first thirteen varieties are freestones, the last seven are pavies, or clingstones.

1. *Fairchild's Early.*—Fruit very early, but small; of globular shape; yellow in the shade, deep scarlet next the sun; flesh yellow, not juicy, but well flavored; ripens early in August.

2. *Miller's Elruge.*—One of the very best and most high flavored nectarines; fruit medium size, of a dark red and pale yellow color; pulp melting, very juicy, rich and high flavored; ripens middle of August.

3. *Early Violet, Violette Hative, Petite Violette Hative, Violet, Lord Selsey's Elruge, Large Scarlet.*—Fruit variable in size, generally medium; pale yellowish green, but darkish purple red next the sun; flesh melting, juicy, rich and excellent; ripe in August.

4. *Pitmaston's Orange.*—A good sized globular or heart shaped fruit, of a rich yellow color, but dark crimson or purple next the sun; flesh golden yellow, but red next the stone, from which it separates; it is melting, juicy, saccharine and high flavored; ripe middle and end of August.

5. *Vermash, True Vermash.*—This fruit is of rather small size, and of round form, tapering towards the eye; the skin is a very deep red color next the sun, and of greenish hue on the other side; pulp rich, melting and juicy. The fruit is at maturity in August.

6. *Aromatic.*—A middle sized, rather globular fruit, deep red or brown next the sun; flesh pale straw, but red at the stone; juice of a rich vinous flavor; ripe by the end of August.

7. *White Nectarine, Old White, Brugnon Blanc Musquee, Nectarine Blanche de Weitzenfeld.*—Fruit middle sized, roundish; color very pale yellowish green, becoming almost white in the shade, and slightly tinged with red next the sun; flesh tender and juicy, with a fine vinous flavor; ripens early in September.

8. *Common Elruge.*—Fruit large, roundish, inclining to oval; skin deep violet or blood color when exposed, with minute brownish specks, paler in the shade; flesh whitish, melting, very juicy, rich and high flavored; a much esteemed fruit, ripening early.

9. *Scarlet.*—Fruit medium size, of a beautiful scarlet color next the sun, and pale red on the shaded side; the flesh separates from the stone, and is at maturity in August.

10. *Temples.*—A fruit below medium size, rather oblong; pale red next the sun; flesh white; it shrivels when ripe; very juicy, rich, and of fine flavor, and is at maturity in September.

11. *Peterborough, Late Green.*—The fruit is of medium size, round form, and always of a green color; the part next the sun being of the deepest green, and the other side of a paler hue; the flesh is firm and of pleasant flavor; and the fruit lasts till October.

12. *Murry.*—Fruit medium size, dingy red and pale green color, and has a rich juicy flavor. A much esteemed fruit.

13. *White or Flanders Nectarine, New White, Emmerson's New White.*—A middle sized, roundish, very pale fruit, slightly tinged with red next the sun; flesh tender and juicy, with a fine vinous flavor. The Pomological Magazine describes this as a clingstone; Lindley as a freestone.

14. *Early Newington, Lucombe's Seedling.*—Fruit large, ripens in August, and is of a deep red color; pulp super excellent; considered by some as the best of all nectarines.

15. *Italian, Brugnon, or Italian.*—A large globular, pale yellow fruit, marbled with dark red next the sun; flesh firm, yellow, red at the stone, juicy, rich and excellent; ripe in August.

16. *Brugnon Violet Musque, Brugnon Musque.*—Fruit large, of a deep red and yellow color; skin very smooth; flesh yellow, but red at the stone; saccharine, vinous, musky; at maturity in September.

17. *Golden.*—Fruit medium size, of the finest orange color, delicately and beautifully mottled with red next the sun, which gives to it a clear waxen appearance; flesh firm, yellow, pale red at the stone, and has a poignant, rich flavor; ripens in September.

18. *Red Roman, Roman Red.*—A very excellent nectarine, of large size; the skin dark red next to the sun, and of a yellowish hue on the other side; flesh yellowish, but red next the stone; it abounds with rich juice when fully ripe, which is about the middle of September.

19. *Scarlet Newington, Late Newington, Old Newington.*—This variety is much esteemed; the fruit large, of a beautiful red color next the sun, and a fine yellow on the other side; its quality is excellent, being rich and juicy; ripe by the middle of September.

20. *Tawny Newington.*—Fruit largish, somewhat ovate; tawny colored, marbled with dull red or orange next the sun; flesh pale yellow, but red at the stone; very juicy, sugary, and of the most delicious flavor; ripens in September.

PEACHES.

The first thirty-eight varieties are freestones, the last twelve, pavies or clingstones.

1. *White Nutmeg, Avant Peche Blanche.*—Fruit small, round, and of white color; juice sugary and musky; esteemed for being the first sort ripe.—July.

2. *Red Nutmeg, Brown Nutmeg, Avant Peche Rouge.*—The growth of this tree is exceedingly slow, its habits dwarfish. The fruit, which is at maturity by the middle of July, is of yellow and red color; the pulp is rich and musky, and esteemed for its precocity.

3. *Green Nutmeg, Early Anne.*—This variety is said to have originated in Berkshire, England. The fruit is of round form; color yellowish green, tinged with red; pulp melting, juicy, and of very pleasant flavor; the tree is a good bearer, and the fruit ripens early in August. Murray's Early Anne is a variety raised from the seed of this.

4. *Neil's Early Purple, Early Purple of Miller, Johnson's Purple Avant, Padley's Early Purple, Veritable Pourpree Hative, Peche du Vin.*—One of the most beautiful of peaches; of largish size, and of a fine deep red and purplish color; it ripens in the middle of August; flesh

melting, juicy, with a rich vinous flavor; an excellent fruit.

5. *Montaubon.*—Fruit round, of medium size; color dark red, approaching to purple next the sun, but of yellowish green on the other side; flesh tender, melting, rich juicy, and of pleasant flavor; ripens in August.

6. *Sweet Water, Early Sweet Water.*—This variety is said to have originated at Flushing; its form is round, and its color whitish green at maturity, which is early in August; the flesh is very tender, melting, rich and juicy.

7. *Brevoort's Seedling.*—A superior freestone peach, raised by Henry Brevoort, Esq., of New York; pulp tender, juicy, and of excellent flavor; ripens in August.

8. *Petite Mignonne, Double de Troyes, Peche de Troyes, Mignonette.*—The tree is of feeble growth, but productive; skin downy, fine, pale yellow, but red next the sun; flesh melting, juice abundant and of fine flavor; ripens in August.

9. *Emperor of Russia, Serrated Leaf, or Unique.*—The tree is of medium vigor, but the young wood is said to be subject to mildew; the fruit, which ripens early in August, is deeply cleft, one half of it projecting considerably beyond the other; the flavor of the flesh is very good. This sort originated in New Jersey twenty years ago, and all the stones of this fruit are said to produce plants with jagged leaves.

10. *Washington Peach.*—A first rate peach; color a pale yellow in the shade, but dark red next the sun; flesh very juicy and delicious; ripens towards the end of August.

11. *Madeleine de Courson, Madeleine Rouge, Rouge Paysanne, Red Magdalen of Miller.*—An excellent fruit, of large size, and fine red color; ripens at the end of August; flesh firm, white, very red at the stone; sugary and very rich.

12. *Double Montagne.*—A beautiful and excellent peach, of middle size; skin greenish white, but soft red, marbled with a deeper red next the sun; flesh melting, juice plentiful, and highly flavored; ripe in August.

13. *Spring Grove.*—A medium sized fruit, of a globular form; greenish yellow, but bright crimson next the sun; pulp juicy, rich and high flavored; ripens in August.

14. *White Magdalen.*—Fruit rather large and round, slightly striped with red, and of a yellowish white color; it ripens in August; flesh white, fine, melting, and pretty high flavored.

15. *Belle Chevreuse.*—Fruit medium size, oblong form, and of a red and yellow color; ripens in the end of August; the pulp is rich, juicy and sugary; tree a good bearer, and the fruit highly esteemed.

16. *Malta, Peche Malte, Belle de Paris, Malte de Normandie.*—Fruit above the medium size; pale yellowish green, marbled with purplish red; flesh yellowish, juicy, rich, vinous and of superior flavor; ripens at the end of August.

17. *Acton Scot.*—Fruit below the medium size; color pale yellow, but bright red and marbled next the sun; flesh melting, juicy, and pretty good.

18. *Royal Kensington.*—Fruit of a high red and yellow color; flesh rich and juicy when at maturity, which is early in September; a first rate peach.

19. *Noblesse.*—The tree is of vigorous growth, and very productive; fruit large, and of a pale red color; pulp juicy, rich and melting when at maturity, which is early in September.

20. *Van Zandt's Superb, Waxen Rareripe.*—This variety originated with Mr. Van Zandt, of Flushing; its skin is smooth, somewhat mottled, and of a beautiful waxen appearance; flesh melting, and of excellent flavor.

21. *Grosse Mignonne, Veloutee de Merlet, Grimwood's Royal George, Large French Vignonne, Vineuse.*—One of the most beautiful and delicious varieties in cultivation. The fruit is large, of a beautiful red or rose color, and greenish yellow; pulp tender, juicy and high flavored when in perfection, which is early in September.

22. *Bellegarde, Galande, Violette Hative, Noice de Montreuil.*—The tree is vigorous and productive; fruit medium size, much colored, and almost black; flesh firm, saccharine and juicy; a first rate fruit.

23. *George the Fourth.*—An excellent peach, of medium size and globular shape; of pale yellow color in the shade, and dark red next the sun; flesh pale yellow, but red at the stone, from which it separates; a fruit of very superior flavor when at maturity, which is early in September; it originated in the garden of Mr. Gill, Broad-street, New-York.

24. *Double Swalsh.*—Fruit middle sized, ovate; skin pale yellow, but bright deep red next the sun; flesh soft, melting and juicy; an excellent peach; ripe early in September.

25. *Belle de Vitry.*—A large fruit, of fine red color near the sun, on the opposite side a yellowish white; form globular; flesh white, stained with red at the stone; melting, juicy, sweet, vinous and excellent; ripe in September.

26. *Bourdine, Bourdin, Narbonne.*—The fruit is large, round, sometimes a point at its summit; deep red next the sun; flesh melting, sweet and vinous; in perfection by the middle of September; a first rate peach.

27. *Rambouillet, Rambullion.*—This fruit is of rather large size and oval form, with a deep sature; it is of a fine red next the sun, and yellowish on the shaded side; flesh bright yellow, melting, with rich and vinous juice; it ripens in September.

28. *Smooth Leaved Royal George.*—This is considered by Lindley as a superior variety; fruit above the middle size, globular, depressed; skin yellowish white, but of a beautiful red or carmine color next the sun; flesh melting; juice plentiful, and of a high vinous flavor; ripening in September.

29. *Rosanna, Alberge Jaune, Peche Jaune Rousanne, St. Laurent Jaune, Yellow Aberge, Petite Rousanne.*—A middle sized globular fruit, of a yellow color, but next the sun deep red at maturity; a deep sature extends from summit to base; flesh melting, juicy, rich, sweet, vinous and excellent; at perfection in September.

30. *Royal George Mignonne.*—A superior fruit, of globular form; its color yellow and deep red; flesh melting, juicy, saccharine, vinous, and most excellent; ripe in September.

31. *White Blossom, Willow Peach, White Blossomed Incomparable.*—The variety oringinated on Long Island, the fruit is perfectly white, of an oval form and handsome appearance; the flesh is also white, melting, juicy and pleasant; it is much used for preserves when not overripe, and is at full maturity in September.

32. *Red Check Mulacatune, Yellow Malagaton, Alberge Incomparable.*—This variety originated at the Flushing nursery; the fruit is of large size and oval form; its color is yellow, with a red cheek on the sunny side; the flesh is also yellow, melting, rich, juicy and luscious. There is another variety of this fruit, which originated with Mr. Polls of New York, said to be very productive, and of excellent quality; ripens in September.

33. *Nevette, Velontee Tardive.*—Fruit large, a little oblong, downy, green in the shade, and deep red next the sun; flesh firm, saccharine and high flavored; ripens towards the end of September.

34. *Late Admirable, Royale, Royal, Bourdine.*—Fruit large, roundish, inclining to oblong; sature deeply impressed along one side, having the flesh swelling boldly and equally on both sides, with a slight impression on the summit; skin downy, of pale green color, streaked with dull tawny red; flesh white, delicate, melting, juicy and high flavored; a "magnificent peach," ripening in September. Mr. Prince has the *Teton de Venus* under this head, as a synonym; but it is generally considered as a distinct variety. Mr. Kenrick says, that there are two or three varieties named Teton de Venus.

35. *President.*—This variety originated at Bedford, on Long Island. It is a rich, melting, juicy fruit, ripening in September; it is of large size, roundish, with a shallow sature; skin very downy, dull red next the sun, pale yellowish green in the shade; a first rate peach.

36. *Hoffman's Pound.*—This fruit is by some called the *Morrissania*, from its having been first obtained by Mr. Floy, from Gouverneur Morris; but it originated with Martin Hoffman, Esq., of New York. The fruit is very large, weighing from twelve to fourteen ounces; very juicy and delicious, parting from the stone; greatly esteemed from its ripening late, about the middle of October.

37. *Monstrous Lemon, Largest Lemon.*—This variety was first discovered in the garden of Mr. Tiebout, of York Island; the fruit is of the largest size, and in the gardens of two persons in New York, has weighed seventeen ounces, as stated by Mr. Prince. He says the tree does not bear well unless the situation is a sheltered one; the fruit is late in ripening.

38. *Heath, Kenrick's Heath.*—This variety was first obtained from the late Gen. Heath, of Roxbury, near Boston. The fruit is very large, oblong and beautiful; frequently weighing half a pound; color pale yellowish green, with crimson or violet next the sun; its flesh is melting, juicy, rich, vinous, agreeably acid, and good; ripens in October.

39. *Heath, Heath Clingstone.*—Mr. Prince says that the original tree of this variety was discovered growing wild, on the farm of the late Judge Willet, of Flushing, and took its name from its being found in a barren field. The fruit is very large, of oval or oblong form; the skin is white; the flesh is peculiarly rich and high flavored, ten-

der, melting and juicy. There is another variety mentioned by Mr. Kenrick, and called by the same name, stated by Mr. Coxe to have been raised from a stone brought by Mr. Heath from the Mediterranean.

40. *Catharine.*—Fruit large, round, variable; color a beautiful red next the sun, marbled and dashed with darker shades; pale yellow in the shade; flesh very white, tinged with yellow; juice abundant, and of very rich and sweet flavor; tree a good bearer.

41. *Pavie Admirable, Incomparable.*—Fruit large, roundish; skin pale yellow, shaded with scarlet or deep crimson next the sun; flesh pale yellow, juice sugary and well flavored.

42. *Lemon Clingstone, Pine Apple, or Kennedy's Lemon.*—The fruit is rather large, oblong; color in the shade, deep yellow, but of a dark red next the sun; the flesh is yellow, rich, vinous, a little acid.

43. *Prince's Blood Clingstone, Blood Clingstone, Claret Clingstone.*—The fruit is oval, and of a large size; the skin is of a dark purplish color, and very downy; the flesh of a crimson or purplish tint; suited for preserves and pickles.

44. *Monstrous Pavie of Pompoone, Gros Melecoton, Gros Persique Rouge.*—Fruit very large and round, downy, of a fine red and greenish white color; flesh white, deep red at the stone, juicy and vinous; excellent for preserving; tree a good bearer.

45. *Old Newington.*—This fruit is large and globular, of a fine bright red and pale yellow color; flesh yellowish white, very juicy, rich, sweet and well flavored; very productive.

46. *Diana.*—A large, oblong peach; color white in the shade, but red next the sun; flesh very juicy and delicious.

47. *Pavie Magdeleine, Pavie Blanc, Melecoton, Myrecoton, Persique a Gros Fruit Blanc.*—The fruit is large and downy; white in the shade, and red next the sun; flesh white, fine, melting, and of an agreeable musky flavor.

40. *Hoyte's Lemon Clingstone.*—This fruit is of the largest size; of a clear golden yellow in the shade, but bright red next the sun; its form resembles a lemon, and some have weighed twelve ounces; its flesh is firm, and is at maturity in New York by the end of September.

49. *Yellow Alberge Clingstone, Persais d'Angoumois, Pavie Juan, Persecque Jaune.*—Fruit of fine size and beautiful form; the skin is velvety, yellow where shaded, and speckled with reddish points; the flesh is firm, rather dry, and almost breaking; its color is yellow; it is deemed an excellent fruit.

50. *Early Newington, Smith's Newington, New York Early Newington.*—This should have been placed first on our list of clingstones, as being the earliest. A much esteemed fruit; its color in the shade is white, but next the sun red; its form is globular; its flesh is juicy, rich, and high flavored. The tree is productive, and the fruit matures in August and September.

President Jefferson said that the habit of using ardent spirits by men in public office, had produced more injury to the service and trouble to himself than any other cause during his administration of the government.

MISCELLANEOUS.

STATEMENT

Of the quantity of Rain which has fallen in each year, from 1810 *to* 1834, inclusive,—the first fourteen years by the guage of P. Legoux, at Spring Mill, and the following eleven years by that kept at the Pennsylvania Hospital:—

	inches.		*inches.*
1810,	32,656	1823,	41,815
1811,	34,968	1824,	38,740
1812,	39,300	1825,	29,570
1813,	35,625	1826,	35,140
1814,	43,135	1827,	38,500
1815,	34,666	1828,	37,970
1816,	27,947	1829,	41,850
1817,	36,005	1830,	45,070
1818,	30,177	1831,	43,940
1819,	23,354	1832,	39,870
1820,	39,609	1833,	48,550
1821,	32,182	1834,	34,240
1822,	29,864		

The whole quantity which fell in the above 25 years was 914,743 inches, which gives an annual average of 36,589 inches.

The rain in each month of the year 1834, was as follows:

	inches.		*inches.*
1st mo.	2,49	9th mo.	3,57
2d "	2,22	10th "	3,29
3d "	2,02	11th "	3,01
4th "	2,83	12th "	2,33
5th "	3,52		
6th "	3,99	Total,	34,24
7th "	4,35		
8th "	0,62		

Penn. Hospital, 1st mo. 1, 1835. *Poulson.*

[From the Tallahassee Advertiser.]

On Loosening and Pulverizing the Soil.—The great importance of deeply loosening the soil, may be seen from a consideration of the distance to which the roots of many vegetables extend themselves, when the soil is open to receive them. The earth, from its own gravity, settles down into a hard, compact and impenetrable body. While in this state, the roots of plants, which are the collectors of food, cannot find a free passage nor overcome the continual resistance.

The activity of the vegetable life may push them a little from the stem; but they neither ramble at large nor draw the same copious supply of nutriment. When we trace roots to the boundary of their range, we are struck both at the distance to which they travel, and at the obstacles which they surmount. Mr. Peters, President of the Blockley & Marion Society, states that a grain of wheat, if planted in a mellow soil, will strike its root three feet downwards, and elongate much farther horizontally.

The roots of oats have often been discovered at eighteen inches from the stem; and those of the turnip, which, with the exception of the bulb and tap-root issuing from it, are all slender, flexible threads have diverged on all sides to the distance of twenty inches. The doctrine may be illustrated in the garden as well as in the field, and in most cases in the former, with great effect; because there the cultivation is superior, and is carried to greater depth.

The fibres proceeding from an onion, are of a whitish spongy substance, and are distinctly discernable in a black mold; and these have been found fully two feet in a trenched soil. The carrot will often measure from twelve to fifteen inches, and the fibres which feed it must have sunk much deeper. The potatoe will push out leaders to the distance of fifteen and eighteen inches in a sandy open loam, well stirred with a hoe.

These facts lead irresistably to the conclusion, that the skilful cultivator should prepare the soil for the roots, and employ such instruments as will pierce it deeply and crumble it to powder, for the free and unrestrained passage of the radical fibre. If the ground be ploughed only three inches deep, the roots can descend no farther than the share and coulter have gone before them; and if a tangled sod of grass be *merely turned* over, and without being broken and pulverized, they will find vast difficulty in stretching themselves through this matted net-work.

The same observations will apply, if the surface be encumbered with unsubdued and broken clods. The roots will be unable to penetrate their hard coats, and however full of vegetable nourishment, it must be lost, because inaccessable to these dispersed feeders of the crop. The fitness therefore, of every instrument to loosen the soil, becomes a criterion in judging of its merits; and its perfection is exactly in proportion to the superiority of its structure for accomplishing this essential end.

SONG OF THE OWL.

Oh! the owl so sedate—and such mirth in his pate,
Is e'er like a friar in his cowl,
Who thinks less of his books, as grave as he looks,
Than he doth of a buss and a bowl.
The owl, the owl, the merry merry owl,
The merry merry owl for me,
Who laughs as he tells the church-yard bells
As they chime their one, two, three,
As they chime their one, two, three,
To-Whoo!

Oh! roguery lies in his drowsy eyes,
And his tongue hath a waggish tone:
Hark! hark! how he croaks from the dark old oaks,
To frighten young Jock and Joan.
The owl, the owl, the merry merry owl,
He laugheth the world to scorn;
He passeth his jest like a blade of the best,
And chanteth from night till morn,
And chanteth from night till morn,
To-Whoo!

The brown, brown lark is afraid of the dark,
And he goeth to bed with the sun;
Out, out on the sot! the owl goeth not
Till he see daylight begun.
The owl, the owl, the merry merry owl,
He doeth as I delight,
He waggeth his head when the moon goes to bed,
And bids her a gay good night—
And bids her a gay good night,
To-Whoo!

CONTENTS OF THIS NUMBER.

Obituary of N. Underwood—A request—New Potatoes—Test of the quality of milk—Book Farming—Culture, &c. of Tobacco—Youatt's Lectures; on Glanders continued—Choice of Fruit Trees continued—Rain report since 1809—On loosening and pulverizing the soil—Song of the Owl.

BALTIMORE PRODUCE MARKET.

☞ *These Prices are carefully corrected every* MONDAY.

☞Again we have but a meagre and rather uncertain report of the market to present, owing to the state of the weather and of the roads. We are gratified however in saying that by means of the ice boat "*Relief*," OUR HARBOR HAS BEEN KEPT OPEN, and vessels have been *gallanted* in and out without interrnption by ice. The only article now in really brisk demand is sleighs and horses, and even the latter of these are growing "rather dull."

In general there are very few trade transactions, and those few at nearly same rates as last week.

	PER.	FROM	TO
BEANS, white field,	bushel.	——	3 00
CATTLE, on the hoof,	100lbs.	5 00	5 50
Slaughtered,	"	3 00	4 00
CORN, yellow,	bushel.	60	62
White,	"	60	62
COTTON, Virginia,	pound.	17	——
North Carolina,	"	14	16
Upland,	"	17	18½
FEATHERS,	pound.	35	37
FLAXSEED,	bushel.	1 62	1 70
FLOUR—Best white wheat family,	barrel.	6 00	6 50
Do. do. baker's	"	5 50	6 00
Do. do. Superfine,	"	4 75	5 00
Super Howard street,	"	4 62	4 75
" " wagon price,	"	4 50	——
City Mills, extra,	"	4 87	5 00
Do.	"	4 75	4 87
Susquehanna,	"	5 25	——
Rye,	"	4 00	4 12
GRASS SEEDS, red Clover,	bushel.	5 50	6 00
Timothy (herds of the north)	"	3 00	3 50
Orchard,	"	3 00	3 50
Tall meadow Oat,	"	2 00	2 50
Herds, or red top,	"	1 25	——
HAY, in bulk,	ton.	16 00	——
HEMP, country, dew rotted,	pound.	6	7
" water rotted,	"	7	8
HOGS, on the hoof,	100lb.	5 00	——
Slaughtered,	"	5 50	——
HOPS—first sort,	pound.	15	——
second,	"	13	——
refuse,	"	11	——
LIME,	bushel.	30	33
MUSTARD SEED, Domestic,	"	5 00	6 00
OATS,	"	33	35
PEAS, red eye,	bushel.	60	——
Black eye,	"	80	85
Lady,	"	100	——
PLASTER PARIS, in the stone,	ton.	3 12	——
Ground,	barrel.	1 37	——
PALMA CHRISTA BEAN,	bushel.	1 50	1 56
RAGS,	pound.	3	4
RYE,	bushel.	65	68
TOBACCO, crop, common,	100 lbs	4 25	5 00
" brown and red,	"	5 00	7 00
" fine red,	"	7 00	9 00
" wrappery, suitable for segars,	"	6 00	12 00
" yellow and red,	"	8 00	12 00
" yellow,	"	13 00	17 00
" fine yellow,	"	15 00	25 00
Seconds, as in quality,	"	3 50	5 00
" ground leaf,	"	5 00	9 00
Virginia,	"	4 00	——
Rappahannock,	"	——	——
Kentucky,	"	4 00	9 00
WHEAT, white,	bushel.	1 03	1 09
Red,	"	90	95
WHISKEY, 1st pf. in bbls.	gallon.	31	32
" in hhds.	"	29	——
" wagon price,	"	29	30
WAGON FREIGHTS, to Pittsburgh,	100 lbs	——	1 50
To Wheeling,	"	——	1 75
		washed.	*unwash*
WOOL, Prime & Saxon Fleeces,	pound.	50 *to* 60	24 *to* 26
Full Merino,	"	44 50	22 24
Three fourths Merino,	"	37 44	22 24
One half do	"	33 37	22 24
Common & one fourth Meri.	"	30 33	20 22
Pulled,	"	31 33	22 24

BALTIMORE PROVISION MARKET.

	PER.	FROM.	TO.
APPLES,	barrel.	$3 00	$5 00
BACON, hams, new,	pound.	11	——
Shoulders,	"	8	9
Middlings,	"	——	——
BUTTER, printed, in lbs. & half lbs.	"	25	37
Roll,	"	15	25
CIDER,	barrel.	——	——
CALVES, three to six weeks old	each.	3 00	6 00
Cows, new milch,	"	17 00	30 00
Dry,	"	6 00	10 00
CORN MEAL, for family use,	100lbs.	1 50	——
CHOP RYE,	"	1 50	——
EGGS,	dozen.	19	20
FISH, Shad, salted,	barrel.	5 75	6 00
Herrings, salted, No. 1,	"	4 75	——
Mackerel, No. 1, 2 & 3,	"	5 00	7 00
Cod, salted,	cwt.	2 50	3 00
LAMBS, alive,	each.	1 25	2 00
Slaughtered,	quart r	31	50
LARD,	pound.	8	9
ONIONS,	bushel.	62	75
POULTRY, Fowls,	dozen.	1 50	2 25
Ducks,	"	——	2 50
POTATOES, Irish,	bushel.	40	62
Sweet,	"	——	——
TURNIPS,	"	37	50
VEAL, fore quarters,	pound.	3½	4
Hind do.	"	6¼	——

ADVERTISEMENTS

AMERICAN FARMER ESTABLISHMENT,

No. 16 *S. Calvert street, Baltimore, Md.*

COMPRISING a Stock and Experimental Farm; a Nursery and Seed and Flower Garden; a Store for the sale of Field and Garden Seeds and Agricultural Implements and Books; a general Agricultural and Horticultural Agency; the Publication Office of the "Farmer & Gardener, and Live Stock Breeder & Manager," and of "Hints to Farmers;" and an Office of APPLICATION for Farmers, Gardeners, Overseers, Managers, &c.

I. IRVINE HITCHCOCK, *Proprietor.*

This establishment is now in full and successful operation, nearly every department, especially that of seeds, being well supplied with articles of the most desirable quality.

Orders by wholesale or retail will be promptly executed on terms that cannot fail to give entire satisfaction to purchasers.

As the limits of an ordinary advertisement preclude the possibility of conveying an adequate idea of the variety and the value to the cultivator and dealer in seeds, of the contents of this establishment, a comprehensive and descriptive PROSPECTUS AND CATALOGUE has been printed and will be sent gratis to any gentleman who will transmit to the proprietor his address (post paid) for that purpose.

A CARD—The labour of superintending with the requisite degree of care the various departments of the concern above mentioned, the business of which is fast increasing, and which seems capable of being carried on with adequate capital and activity to any desirable extent, is becoming entirely too great for the physical powers of the present proprietor alone to accomplish. Wearied with intense and unremitted labour and care, he is induced for the sake of relief, by a division of labour, to offer an interest in the concern FOR SALE. He will therefore receive proposals from any gentleman to unite with him by the investment of any sum from one to five thousand dollars, and will be glad to make and receive *confidential* communications on the subject. Address as above. Jan. 13

GRAPE VINES.

HERE MONT S Madeira, one, two, and three years old, from 25 cents to 75 each.

Isabella, two and three years old, at 25 to 50 cts each.

Catawba, one year old, 25 cts. each.

White Scuppernong, two years old, at 37½ cents each.

Sultana, one year old, at 50 cts. each.

Woodson, one years old, at 37½ cents each.

Red Bland, one year old, at 25 cts. each.

Are for sale at this establishment, and will be well packed to go any distance. no. 25

FRUIT TREES—CHEAP.

An Invoice of fruit trees from a first rate nursery, having been missent, is offered by the owner for sale a at reduced amount. The opportunity is a favorable one for procurring a lot of first rate trees, at a great bargain. The following is a list of the trees which are laid in the ground by the heels so as to continue unhurt till next spring if necessary.

APPLES.

2 Monstrous Pippin.
2 Royal Pearmain.
2 Long Island Russet.
2 Winter Pearmain.
2 Carthouse.
2 Bellflower.
2 Vandevere.
2 Red sweet Vandevere.
2 Michael Henry Pippin.
1 Winesap.
6 York Greening.
7 Red Streak.

PEACHES.

1 Teton de Venus.
4 Malcaton.
1 Lehman's cling.
2 Gough's Cling.
3 Oblong open Peach.
1 Fine Cling.
2 Early Etna.

CHERRIES.

3 Oxheart
3 York Duke
3 Tartarian
3 Red heart
3 Bleeding do
2 Morrello
1 Orleans.
2 May Duke.

QUINCES.

1 Portugal.
1 Orange.

The Invoice including packing mats, &c. amounts to $30, and the whole will be sold for $20, which may be sent to I. I. HITCHCOCK.
Amer. Farm. Estab.

MORUS MULTICAULIS.

THE subscriber has on hand a few hundred of this celebrated Tree, unrivalled in the quality of its leaves as food for the silk worm, for which he is ready to receive orders (accompanied by the cash) with *particular* directions for the delivery of the trees on or after the first of Nov. next. Price 50 cents each, $5 per dozen, or $40 per hundred.

The success and ease with which this tree is propagated, the extraordinary quickness of its growth, the superiority of its leaves over *all* others for the silk culture, and its uncommon luxuriance and beauty, altogether recommend it to the favourable notice of *every farmer* as a most valuable acquisition. I. I. HITCHCOCK,
aug. 26 Amer. Far. Estab.

TERMS OF THIS PAPER.

1. Price five dollars per annum, payable in advance. ☞When this is done, 50 cents worth of any kind of seeds on hand will be delivered or sent to the order of the subscriber with his receipt.

2. The *manner* of payment which is preferable to any other for distant subscribers, is by check or draft on some responsible party here, or else by remittance of a current bank note; and to obviate all objection to mail transmission, *the conductor assumes the risk.*

3. Subscriptions are always charged BY THE YEAR, and never for a shorter term. When once sent to a subscriber the paper will not be discontinued (except at the discretion of the publisher) without a special order, on receipt of which, a discontinuance will be entered, to take effect AT THE END of the current year of subscription.

4. Subscribers may receive the work either by mail in weekly numbers, or in monthly or quarterly portions; or else in a volume (ending in May annually), handsomely pressed, half bound and lettered (to match with the American Farmer) by such conveyance as they may direct: but the $5 must in all these cases be paid in advance.

☞ADVERTISEMENTS relating to any of the subjects of this paper will be inserted once at one dollar per square, or at that rate for more than a square, and at half that rate for each repetition.

THE FARMER & GARDENER;

AND LIVE-STOCK BREEDER & MANAGER.

CONDUCTED BY I. IRVINE HITCHCOCK, AND ISSUED EVERY TUESDAY FROM THE AMERICAN FARMER ESTABLISHMENT, AT $5 PER ANNUM, IN ADVANCE

No. 38. **BALTIMORE, JANUARY 20, 1835.** **Vol. I**

☞This publication is the *successor* of the late
AMERICAN FARMER,
(which is discontinued,) and is published at the same office, at five dollars per year, payable in advance.
☞When this is done, 50 cents worth of any kind of seeds on hand will be delivered or sent to the order of the subscriber with his receipt.

American Farmer Establishment.

BALTIMORE: TUESDAY, JANUARY 20, 1835.

☞We tender our sincere thanks to our respected correspondent "Agricola," for his valuable communications. While most farmers, *miser-like*, keep their experience to themselves, he puts pen to paper and lets his light so shine that others see his good works. He is evidently at once skilful and industrious, both in the field and in the cabinet. How easy, we again repeat, would it be for farmers to do good to others at the same time that they would improve themselves; for we know from experience that the very best way in which a man can perfect his knowledge of any speculative subject, is to sit down and write out his ideas, even if he burn the manuscript as soon as he has done it. Again we thank "Agricola."

NEW PERIODICALS.—We have received the first No. of the "*Horticultural Register and Gardener's Magazine*," (recently mentioned in this paper,) published by Geo. C. Barrett at the office of the New England Farmer. It is well filled with original and selected articles of real value, some of which we shall hereafter take the liberty to transfer to the columns of the Farmer & Gardener, by way of specimen.

"*The American Gardener's Magazine*, and Register of all useful discoveries and improvements in Horticulture and rural affairs," is the title of another new periodical, No. I. of which has just reached us from Boston. It is to be conducted by C. M. Hovey and P. B. Hovey, jr. and to appear monthly at $3 per year. It contains some good original and selected articles. It could hardly fail of being very useful to all who desire to improve their gardens in the cultivation of fruits and flowers.

The Southern Agriculturist, which has recently been transferred by its late editor, Mr. Legare, to A. E. Miller, Esq. (who has heretofore printed the work) appears in a new dress and much improved appearance. We have no doubt that the work will maintain the same high character under its new director that it has heretofore enjoyed. Certainly we hope so, and wish our new brother much success.

GO THOU AND——BEAT IT.—The Village Record, has the following account of extraordinary cattle. We should like to know whether in this part of the Union, where grain is always saleable at fair prices, the feeding of cattle thus, can be profitable. In this respect it makes a considerable difference, whether a bushel of corn is worth 62 cents or 12 cents. Some of our western farmers who want facilities for transporting their grain to market, act very prudently in making their live-stock carry it on their bones—but the case seems to us a very different one when the grain requisite to fatten a bullock, will sell for as much at the owner's door as the fattened bullock will command.

CHESTER COUNTY BEEF.—On Thursday, the 1st day of 1835, six head of cattle, owned and fed by Enoch Dickson, of Kennett township, were weighed at Kennett Square, in the presence of a considerable number of farmers from the neighboring townships. We are much indebted to a friend, who has politely furnished us with their respective weights. The

1st	weighed	2562	pounds.
2d	do.	2534	do.
3d	do.	2499	do.
4th	do.	2296	do.
5th	do.	2240	do.
6th	do.	2044	do.

SUGGESTIONS TO HORTICULTURISTS.

[For the Farmer & Gardener.]

Mr. Editor: The interest excited some years ago in the discussion of the means to prevent the depredations of the circulio on the fruit of the plum, &c. and the worm which attacks the root of the peach tree, seems of late to have nearly subsided. If any of your correspondents have discovered any mitigation for these evils, it would subserve an important interest to give it to the public.

The difficulty of getting various kinds of seeds to germinate is a frequent subject of complaint with the inexperienced; it is known that frost and hot water are powerful agents in causing many seeds to vegetate much sooner than they otherwise would, but when and how to apply these auxiliaries is known to very few—would not an essay on this subject be interesting, and tend to fill up a vacuum in the horticultural knowledge of many; we allude more particularly to the hard shelled and resinous seeds, such as haws, roses, arborvitæ, and all the fir tribe—would hot water have the same effect, as exposure to the frost is known to have, on some of these seeds.

In the cultivation of the vine in this country, many implicitly follow the directions laid down for its culture in Europe, without taking into consideration the difference of climate, and consequently its more vigorous growth in this region. All of our native as well as many of the foreign varieties are generally pruned too closely in this vicinity; it would be impossible to cultivate the Isabella according to the European method of close pruning, as its remarkable luxuriance bids defiance to the bounds to which its species has been generally prescribed—this grape seems to require but a slight pruning in the spring, and the after pruning of the lateral or side shoots in the summer appears to be detrimental, as it causes the buds which are intended to produce fruit the next season, to start and bear a second crop, which seldom has time to ripen before the fall frosts appear; this, no doubt, lessens the product of the following year, besides materially injuring the vine by a superabundant expenditure of its sap. The ends *only* of the laterals of vigorous vines should be taken off, which will sufficiently check their luxuriance without any danger of forcing an abortive crop.

With an apology for troubling you, I remain,

Yours, very respectfully, M.

Jan. 12, 1835.

Comparative statement of sundry articles which passed Utica, east, up to the 19th May, in the years 1833 *and* 1834.

	1833	1834	Increase	Decrease
Bbls. Flour	128,291	148,818	20,527	
" Ashes	5,921	7,721	1,800	
" Provisions	10,179	14,071	3 892	
Bushels Wheat	79,825	90,220	10,395	
Bushels coarse gr.	2,604	8,799	6,195	
Galls. dom. spirits	489 854	274,517		215,337
Feet lumber	4972,986	5550,806	586,495	
Feet timber	510,370	276,495		233,835
Staves	348,116	887,890	539,774	

THE FARMER.

CORNSTALK FODDER.

To the Editor of the Farmer and Gardener:

In some late numbers of your "Farmer & Gardener," I read with much pleasure a detail of the management of the CORN STALK as a food for cattle, &c. First induced to turn my attention to this subject by the different communications to be found in the "Farmer," for some years back, I began in 1830 to test the value of the refuse of corn, when subjected to the process of steaming. I was not long inventing a strong, rough apparatus for my purpose, which succeeded well, and in which I prepared about twenty bushels at once. Previous to this, I had, however, fallen on a plan of saving my corn and stalks, &c. somewhat different from my neighbors; but in a way that the columns of your valuable paper had been long laboring to persuade the *corn planters* of the country to try fairly, viz: to *cut down the stalk at the ground*, at a certain stage of maturity, and at one effort to cure corn, stalks, blades, &c. in the field. I had seen this first practiced on the South branch of Potomack, as far back as 1812; and about 1817, I determined to try the process in this section of the Union, not being able to discover any solid reason why it should not succeed as well here as on the South branch of Potomack, or elsewhere; but indeed compelled to believe, from a recollection of the climate I was in, that it must succeed here much better. In 1817, I tried six acres—cut it down at the ground, about a week after the *blades* were ready for stripping. I found a little shrinkage in the grain, but I felt satisfied, that as my corn was not like Sterne's razor, "*made to sell*," but to eat, that what was lost by the shrinkage was no part of the *nutritive principle;* and I did not despair of getting over that difficulty, by further trial, and by improving the mode of proceeding.

The following year I cut down *five acres.* I began the *saving* of this field of corn by going through it, as *soon* as a few of the under blades appeared ready to pull, and gathered and brought them home, throwing them in an old out-house to cure, and which, by a little turning over, I readily effected. I will remark here, that this *five acres* was a piece of corn on which I was trying the effect of rotten cotton seed as a *manure*, by planting four stalks in the hill, on light land, at the distance of *five feet* by *four.* On this field I had determined also to try the full effect of an economical management, in saving the result of labor bestowed on the earth—"Save all" was my motto, and I literally saved every blade.

Before my corn required a *second* pulling of blades, I found the *shuck* on the *ear* in that state, which authorised, I believe, the next step, and the principal one I had in view, the new mode of saving the balance by one "*coup de main.*" The result of observation and reflection induced this determination, viz: that in the saving process, the mode of stacking the corn stalks that would permit them to cure the most *gradually*, would certainly admit the least loss by shrinkage, from evaporation, &c. To effect this, I selected four strong, careful hands, to cut and lay down, taking *eight* rows at a through. On getting to the end of the rows, they turned round, and gathered together *sixteen hills*, each bringing to one who attended to the stacking. As each man placed his armful on the ground, the butt ends were pressed by him as far *into the earth* as possible, throwing the tops together, so that when the sixteen hills were brought together at the tops the mass presented a sugar-loaf appearance, spread well at the bottom, to admit the entrance of air—tying at the top with a bandage of crab grass, found among the corn, and twisted into a small rope in a few minutes. In this way I cut and stacked my field. On the 10th day, I found by an examination of the inside of the stacks, that the whole was cured in a way that I could not have exceeded by any other process, although the weather had been *rainy* occasionally. I hauled the whole home, and packed it away under open sheds, and in old out-houses. In this state it continued, until winter's bleak and stormy weather admonished us that in-door business was to be attended to; when all hands went to stripping "*corn* and *fodder* from *stalks.*" In doing this, I observed the following order, viz: each individual threw his ear of corn, as he pulled it off, *behind* him, and his *stalks* on one side, laying them down with attention to *regularity;* and the fodder on the other—as soon as he had an armful of stalks to remove, he rose and placed the *stalks* in a *pile*, casting the fodder into another depository. All this precaution, as regarded the *stalks*, was to have them in a situation that with expedition and convenience they could be placed in the *cutting-box*, to which they were to be subjected. In one day's work, I had a prodigious pile of stalks thus stripped. The next *rainy* day, I brought in my "*Eastman*," and a man and boy soon reduced the pile to pieces, half an inch in length. Here, sir, I would just remark, what a quantity of this *labor* I got through within a short time, by pursuing every movement systematically, and being prepared for every operation before I commenced it. It will now be readily granted, that I had saved as much of the *nutritive qualities* of the *stalk*, *shuck* and *blade*, by my mode of curing, as was possible to effect; and also, that I had prodigiously *diminished the labor* usually bestowed in the common mode of saving *corn* and its *refuse.* At the same time that I was preparing the *stalks*, I also *shucked*, so that in cutting up the *stalks*, I cut, at the same operation, a proportion of *shuck* with *stalk.*

But the principal object was yet to begin, viz: to prepare these cut *stalks* and *shucks* in such way as would render them the most *nutritious* and *palatable* food for cattle. To effect this, I proceeded thus: I placed three *strong* hogsheads, made of cedar, *well pitched*, on the outside, on a platform, about three feet from the ground, having at the bottom a large spigot to let off their contents. Just before these, I had a large *trough* placed, at the distance of twenty feet, and well enclosed along with the hogsheads. Between the *hogsheads* and the *troughs*, I had the steam apparatus placed, all under a shed. Into these hogsheads I threw a *small quantity of boiling water*, and into the water a *portion of corn meal*, (coarse ground) just sufficient, when the cask was filled, to produce the *vinous fermentation*, as if going to distil; with a good straw mat top, for each cask. After an hour, and well stirring, I filled up with cold, soft water, and left the mass to ferment. As soon as my liquid was ready, or just as the acetous fermentation was about to commence, I worked off in my steaming-box a turn of the *stalks* and *shucks*, mixed up, and as soon as sufficiently steamed, I placed a quantity in my trough, *pressing them well down*, with a *false* top, moveable as I wanted, and now drawing the spigot from the cask *ready*, the liquid was permitted to *cover them*, running along a portable, light trough, such as distillers use for conveying water. This I did in the evening, and by morning I took up in light buckets the quantity required for the morning's feeding of my oxen and cows, &c. placing it in the *feeding troughs*, stepping only a *few feet*, sprinkling a little salt over the mass. The cut *stalks* and *shucks* had become perfectly charged by absorption with the *liquid*, at once one of the most *palatable* and *nutritious* preparations yet discovered—of this food I gave them plenty. The effect on the *flesh* and *milk*, exceeded my most sanguine expectations. My cattle became excessively fond of it, and I so fed as to "lose nothing."

My casks, by a little *management*, I had always "*under way*," one always ready. I now ascertained to my full satisfaction, that I could not bestow too much *trouble*, as it is *called*, in SAVING my CORN STALKS.

Satisfied of the value of my *labor*, I have since added to the *steaming-box* all refuse potatoes, turnips, cabbage leaves, beets, parsnips, carrots and pumpkins, squashes, cucumbers, &c.; in fine all the vegetable productions of the *field*, *orchard*, or *garden*, as the season may afford, "that nothing may be lost"—and I find that I am well paid for the labor bestowed. The last, after absorbing what they will contain of the liquid, goes to the support of "*old Ned.*"

AGRICOLA.

MODERN IMPROVEMENT OF THE SOIL.—Among the means for the improvement of the soil, in modern agriculture, is the rotation of crops and the use of clover, and plaster. The rotation of crops is founded on the obvious principle that in drawing their nourishment from the earth, different kinds of food are required by different plants—for instance, that peas or barley do not deprive the earth of the important principle which furnishes the best food for wheat—that some plants derive more of their support from the air, and take less from the earth than others—and that no two crops which require the same food should be taken in succession from the same piece of land. To this doctrine there may be a few seeming exceptions; such as plants that require for their perfection little besides heat and a small quantity of moisture, as onions have been grown for half a century on the sandy plains of Weathersfield, and the finest melons of the world on the shifting sands of Egypt. Of all plants for the renovation of the soil, none can be considered equal or superior to clover, and it may be deemed a happy dispensation of providence that those soils the best adapted by nature to wheat, are also the most congenial to clover, and derive the most essential benefit from plaster.

MANURE AND PRODUCT IN RETURN.—In Holland, and in some parts of England, the business

of farming is carried to a higher degree of perfection than in any other part of the world, and perhaps the greatest returns are received for the capital and labor employed, and no where does the subject of manure receive so much attention as in these very places. In those countries quantities of manure, which in proportion to the farms cultivated would appear utterly incredible were not the facts placed beyond the shadow of a doubt, are produced by the skill and labor of the occupants; and if in the United States, every rood is to maintain its man, this example must be followed. In Holland instead of a ton or a ton and a half to the acre, which may be considered about the maximum here, from fifteen to twenty tons to an acre are considered as not an extraordinary production of manure, and the results from the application of such a mass of compost are such as might rationally be expected.

Root crops.—In order to carry on the business of breeding live-stock successfully, more attention than is usual among farmers must be paid to root crops, such as Turnips, especially the Ruta baga, Carrots, and Mangel Wurtzel. In no way can so large an amount of food for cattle, horses, hogs, or sheep, be drawn from an acre of land as in one of these crops, or one which in every way is so profitable to the raiser of stock. In estimating the value of green crops there is no necessity of taking the extraordinary yields which are sometimes obtained as a standard. A thousand bushels of the Ruta Baga, and eight hundred of carrots have been raised to the acre, but taking the amount at only one half—and under almost any ordinary circumstances that amount can be produced—and it may be seen at once that a crop of corn, oats, or potatoes, cannot be compared with the Ruta Baga or the carrot for profit. The man who wishes to make the most of his farm, must raise root crops; for if wheat is his object he can spare much more of his land for that purpose, and yet keep the necessary stock, and if raising stock is his business he may depend on seeing his herds and flocks through the winter in much better order, and with less expense, than if he relied on hay alone.

Silk culture.—A sensible writer in the Genesee Farmer, in discoursing on sundry matters interesting to farmers, makes the following observations:—

Another source, and I believe an exhaustless mine of wealth, has been too long overlooked by our farmers, and our citizens generally. Such is the perfection of machinery, and the competition of manufacturers, that most articles of clothing which formerly were made by female industry at home, are now made at these establishments. The wheel and the loom as implements of domestic economy are now rarely seen or heard; and the woolen, the linen, and the cotton, instead of being the production of the fair hands of wives and daughters, owe their existence to power looms and spinning jennies, and are purchased at the store as would be an article of foreign importation.—This is well enough, if the time formerly spent in these domestic avocations, is more profitably employed; on this subject I express no opinion; but can assert with confidence that the introduction of the silk worm would be in most families not only a source of great profit, but the care and feeding of them an innocent and healthy amusement. The procuring a few mulberry trees is the first step, and there are few places where these cannot readily be procured; this done, the rearing and feeding of the worms, and the whole process to the finishing of the cocoons for market is extremely easy and simple. There is not the least reason why millions should be sent from this country every year, for an article which might be produced here in perfection, and which only requires the care and labor of females and children for a few weeks in a year.

[We beg leave to add our conviction, that reeling of the silk by the females of farmers' families, will be found as easy as the raising of the cocoons, and *by far the most profitable part* of the silk business.]—*Ed. Far. & Gard.*

Wheat land.—A writer in the Genesse Farmer, asserts that it is only on lands where lime is abundant, or where what is termed the hardness of the water indicates its extensive prevalence in the soil, that the finest wheat is produced. It may be set down as a maxim in practical husbandry, that good water, and good wheat land, are incompatible with each other; or in other words, that countries of primitive formation, are not by nature adapted to wheat.

[From the Intelligencer and Expositor.]

IMPROVEMENT OF SOIL.

If an inquiring mind will go into the woods, where the soil is what we term rich land, and view nature at work in nature's own way, he will discover readily, that for a considerable depth this rich soil is a composition of vegetable matter principally, more or less decomposed,—in common language, well rotted. He will discover, that what he applies the name of soil to, is composed almost entirely, of the decayed leaves of the trees, with weeds and grass, and rotten wood—perhaps the production of centuries. But on a nice examination of this rich soil, he will be compelled to conclude, from evidence before his senses, incontrovertible, that decayed leaves, form the principal part. If he wishes for conclusive corroborating testimony, he will heap up a mass of them in a pen, sprinkling the mass with lime, and he will find after the process of fermentation, and decomposition has done its office, that the product will, on application to poor soil, produce the finest vegetation, and prove to his senses that it contains the pabulum, or food of plants in a high degree. By still going on with his experiment, he will find ultimately, that leaves when decomposed, with the aid of decomposing agents, produce an admirable assistant to vegetation, and by forming a mass of leaves, sprinkling the leaves as he forms the mass, with lime, and adding a small portion of rich moist earth amongst the vegetable matter, he will find, on applying it to the earth for the purpose of aiding vegetation, that he has got a pile of manure.

From this evidence before him he will readily conclude, if capable of the operation of common sense, that for the purpose of littering animals, and as an assistant, in forming a compost manure, leaves, especially if gathered while charged with their whole elementary principles, must be an admirable auxiliary, in the production of the dung-stead, and worthy of being most assiduously collected for that purpose.

Amongst weeds, or green vegetable substances, experiment has amply decided, that those which produced the most putrid and nauseous effluvia, during fermentation, were found producing the most active effect on the growing crop. This fact seems to settle, by positive proof, the correctness of the theory of many plants feeding rapidly on gasses evolved during the process of fermentation, through the medium of their leaves. As it would be highly desirable, previous to laying down any plan for making manure, in the form of compost, to have some idea of the relative value of different ingredients, which present for that purpose, it may be proper to have some facts placed before us. Leaves piled up in a pen, with alternate thin strata of swamp mud, when partially decomposed are found a superior preparation for the Irish potato crop. Put around the roots of fruit trees this compost has been found to produce a healthy and vigorous growth. Its operation has been much increased in its efficacy, by the addition of lime to the mass. The finest Irish potatoes that I have seen produced in a southern climate, were produced by the addition of this compost.

A pen was made with small rails, a stratum of leaves, trampled down to twelve inches in depth, a sprinkling of lime added; after sprinkling the leaves well with muddy water three or four inches of swamp mud was then added, and this course continued until the pen was six feet in height.—This compost was made up in the fall, on the first falling of the leaves, and applied to the potatoe crop in the spring. The effect on the following crop of corn, was all that could be desired.—A second pile was constructed with a stratum of leaves, two feet thick, sprinkled well with lime, previously, with muddy water—two carts came up, the one loaded with swamp mud, and the other with dung—from opposite sides the throwing on commenced, at equal pace, so as to mingle the two last well; on the layer of mud and manure being completed, say about four inches thick, another layer of leaves was added—sprinkled with water from a pond, then lime, mud and manures, and continued, until the pile was about six feet in height—a little earth was thrown on the top—I am satisfied the same volume of dung, spread over the same surface, would not have exceeded in production, either in the potatoe or corn crop, that followed, and to which the composition was applied on planting. The following crop on both grounds was cotton—it was superior—the seed was drilled in the old corn, and potatoe rows, opened with a Scooter plough. The following years, seed that came from the cotton, the year previous, was applied to a second corn crop, which much surpassed the first, indeed was amongst the finest corn crops to be found—Wheat and Rye followed and were superior.

I give this detail to show, that the efficacy of leaves is decided, in their action on plants, as a manure, when decomposed, for in the crops above stated, they were the basis of the manure that was applied, it being perfectly impossible for all the dung, and lime, that was employed for the formation of the compost, to have produced half the effect, when spread over the soil, or used as the compost was applied. PLANTER.

THE BREEDER & MANAGER.

[From the London Lancet.]

LECTURES ON VETERINARY MEDICINE,
Delivered in the University of London by Mr. Youatt—Lecture IX.—Concluded.

The main Cause is Contagion.—I now approach, Gentlemen, not without hesitation, but without fear, the grand cause of glanders—contagion. I advisedly call it "the grand cause," for I believe that I shall be able to render it probable, that glanders arise oftener from contagion than from any other source. I know that our continental neighbours deny the contagiousness of glanders altogether; but they do not, and cannot deny, that the disease does follow contact, and often mere proximity of situation. When they tell me that it is not the disease that is communicated, but a mere predisposition, a greater aptitude in the frame generally, or some part of it, to be affected by the usual causes of glanders, I cannot but regard this as the merest quibbling. I take the broad fact, that a glandered horse being inadvertently admitted into a stable, some of his companions after a while become glandered too. The stable has previously for many years,—from the very time of its erection,—been free from the disease, and no alteration whatever has taken place in the system of management; a glandered horse finds his way thither, and in a few months the whole team is glandered. When in the face of this a person tells me that it was not the disease which was communicated, but a facility of being acted upon by certain agents, I regard it as a species of quibbling unworthy of a scientific pathologist; and I deprecate the injury which may be done to the agricultural community by the broad assertion, thus ridiculously and falsely, explained, that glanders is not contagious.

Then there are those in our country, and of deservedly high reputation, who, although they admit the contagiousness of the disease, affirm that it is generated a thousand times where it is produced by contagion once. To them I can only oppose the result of the experience of the profession generally, and of the agriculturist everywhere.

I will not detain you by the objections of some medical men, that a disease cannot be at the same time spontaneous and generated. I will ony observe, that there is a degree of folly in entering with much positivity into any general disputation on this subject; for every disease has its own mode of action, and is governed by its own laws; and that what is known of one disease, cannot with certainty be predicated of any other; and, farther, that here, more than on any other point, reasoning from analogy is dangerous and inadmissible. To facts alone we must make our appeal, and to them alone we must bow. We have the undeniable facts, that mange and distemper are both generated and communicated; and every English veterinarian unites in adding to these—glanders. The only dispute is as to the degree of contagion.

Not communicated by contact with the Schneiderian Membrane.—Fortunately it is not so contagious as mange or distemper, or some other diseases. If it were, the breed of horses would be swept away. I am also disposed to acknowledge, that it generally seems to need this predisposition, of which so much has been said, or some faulty management in the stable, in order to render it contagious. Horses have been kept week after week, and month after month, in the next stall, and some in the same stall, without becoming infected. Experiments have been instituted, which have shown that it is sometimes a little difficult to communicate the disease. Mr. White covered a piece of lint with the matter taken from the nostril of a glandered horse, and thrust it up the nostril of a sound horse, and this was repeated on three successive days, without the slightest effect being produced. In a few days the same horse was inoculated with glanderous matter, and he soon after died glandered. Remembering what has been stated with respect to the insidious stage of glanders, and the possibility of the disease actually existing when there was little or no external appearance to indicate it, this single experiment might not be thought conclusive. Mr. White instituted several others. In three horses the matter was introduced into the nostril in the same way, and without effect; but it was applied to the fourth on rough brown paper; the membrane was abraded, the virus mingled with the blood, and glanders succeeded. This point, then, seemed pretty clearly established, that the virus might be received without injury on the very membrane which was the seat of the disease.

Not by the Breath.—The question as to the disease being communicated by the halitus or breath, at least to any considerable distance, is likewise settled. High partitions, but not reaching to the ceiling, have been raised; and, separated by them, and especial care being taken that they should never come in contact, or wear the same harness, or drink out of the same pail, sound horses were kept for an indefinite period of time by the side of glandered ones without injury; they were then, as I have said, placed in the same stall, and yet were unaffected.

Effects of the Virus being swallowed.—Then it was imagined that the virus must be received on an abraded surface, but some difficulties presented themselves here. It was a well-established fact, that after glandered horses had been removed from a stable, and sound ones placed in their stalls, they also became glandered, and when there was no previous unhealthiness of the stable, and no bad management to account for the production of the disease, except that the stalls had not been sufficiently scoured, and some of the matter of glanders in a dry form was probably sticking about them. To this was added the fact, as well established as the former, that horses had been infected by drinking out of the same pail with glandered horses. To these Mr. White adds a more singular fact, that a team of glandered horses stopped occasionally on a gentleman's premises to take up goods, and that during the time of loading they were fed with hay that was thrown upon the ground. More or less of this hay was left, which was generally eaten by a horse and two colts that fed in an adjoining paddock. All three of them became glandered.

Principally by being received on an Abraded Surface.—Hence arises a question whether the matter of glanders being swallowed, and passing into the intestines, and being absorbed by the lacteals, and carried into the system, may not empoison the blood and produce this disease. In drinking from the pail the matter may be thus taken up, or, when left dry on the manger or the rack, it might have been licked off when the sound horse succeeded the glandered one. This is a point which I will not presume to decide, but I would say, if I had not the fear of my own assertion before my eyes with regard to the folly of reasoning from analogy in these cases, that there being so many instances of animal poison being swallowed with impunity, the contamination must be attributed to some abrasion of the mouth, easily to be conceived to be produced by the hard food on which the horse is supported, or the occasionally severe discipline of the bit.

More Contagious than some have Supposed.—One point, however, is established, I think; that glanders is far more contagious than many have supposed: Mr. Turner's mare destroyed four of her companions. The poor widow at Paddington had her stable perfectly emptied by the disease, and, I will venture to say, that there is not a district throughout the kingdom, in which some farmer, by the loss of a considerable proportion, or the greater part, of his team, has not had sufficient proof of the contagiousness of glanders. The cause of this doubt with regard to the frequent communication of the disease by inoculation, seems to have arisen from ignorance of its insidious nature. When glanders appears, and the horse has for several weeks or months scarcely been exposed to the possibility of contagion, it has at once been concluded that the disease was generated in him by some assigned or unknown recent cause. It has now, however, been proved to us that the disease may exist and may be communicated to others, when, for many months, there has been nothing to excite suspicion in the mind of the groom or the owner; and when the candid veterinarian acknowledges that had not the circumstance been pointed out to him, it would probably have escaped his observation. The truth of the matter then is, that every horse that passes through a fair, or is baited at an inn, or even travels the common public road, may be infected without the rider's or the owner's knowledge or slightest suspicion. A glandered stallion neighed at a mare that was separated from him by a double hedge and a deep lane; the virus was wafted across by the wind, and she became diseased and died. It is impossible for any one to say, except there be some plain and manifest cause for the generation of the disease, that any horse did not receive it by infection. There would be a degree of presumption in the assertion which the calm inquirer after truth should not display.

Uncertain Time of its Appearance after Infection.—In the experiments which have been made for the communication of glanders, a few days only have generally elapsed before the disease appeared. In some cases, however, a fortnight or three weeks have passed, and no symptoms of glanders have been seen, and the animal, generally a condemned subject, has been destroyed, or has died from some other malady, and thence the conclusion has been drawn, either that the horse whence the matter was taken was not glandered, or that glanders could not be propagat-

ed in this way. The new light, however, which has been thrown on this early history of the malady, will make us a little doubt whether much dependence can be placed on experiments of this kind. A very interesting one, and bearing on this point, was made by M. Rodet, one of the professors at the veterinary school at Toulouse. He scarified the pituitary membrane of a horse with a lancet, and then rubbed some matter of glanders over it. He also raised the skin from a portion of the cellular substance between the branches of the lower jaw, and injected more of the virus into the cellular texture. This seemed to be making sure of the inoculation. Twenty-six days, however, passed without the slightest effect having been produced, and then appeared a slight running from the nostrils, and enlargement of the submaxillary lymphatic glands. At the expiration of six weeks, the secretion was more copious; it was become viscid, and the glands were adherent. In ten weeks ulcers began to appear on the pituitary membrane, but the horse continued in good condition; he even seemed to be mending when M. Rodet determined to subject him to the influence of mercury. He immediately began to get worse, and was destroyed a month afterwards, but still having lost little of his condition.

The Duty of the Veterinary Surgeon in these cases.—Therefore, Gentlemen, my conclusion is, that it is impossible at all times to say what cases of glanders are spontaneous, and what may have arisen from contagion: that the greater part of those that have been deemed spontaneous, may have arisen from inoculation;—that the numerous cases of undeniable contagion, would lead us to suspect that it is a frequent, or the most frequent, source of the disease; at all events, that it is folly to speak peremptorily on the question; and that if there be doubt about the matter, it is the most prudent, and the safest course, to warn the proprietor of the horse of the danger to which he is exposed on either side, that he may not only pay stricter attention to the proper management of his stable, but adopt all necessary precaution when danger threatens. He will be warned in various ways of the injurious results of heated and ill-ventilated stables; ophthalmia, catarrh, pneumonia, will often teach him a painful lesson: but if he is taught to believe that glanders is seldom, or almost never, communicated; that not one horse in a thousand receives the disease from contagion, he will neglect those precautionary measures which would have saved his whole establishment from ruin.

The law is severe against the offering for sale, and even the working of glandered horses, and the opinion of our ancestors, from time out of date, had taught us to beware of glanders as a contagious as well as a fatal disease. Let us not, without incontestable proof, abandon that which for ages was never doubted, and, most of all, let us not do it, where, from the nature of the case, *no proof can possibly be given;* where all the persuasions offered to us must be theoretical alone, and where an error would not only compromise our reputation, but do irreparable injury to our employers.

Glanders in the Human Being.—It is affirmed that glanders is communicable to the human being. That a loathsome and a fatal disease results from inoculation with the matter of glanders is undoubted, but that it bears the true character of glanders I do doubt; but of this my medical hearers, now that the symptoms and course of glanders have been described, will determine better than I can. I am aware, indeed, of one case which goes a great way towards establishing the identity of the diseases. One of the feeders in the Badsworth hunt cut himself while preparing a farcied leg for the hounds. He died within a week. A day or two before his death, an ass was inoculated with the matter from some of the sores that broke out about him, and died evidently glandered. This is a strong case, but then on the other hand, I know that every thing that causes much disturbance in the frame will likewise produce glanders, and particularly inoculation with the discharge of grease, with putrid matter of any kind, and even the injection of acrimonious fluids into the nose and the jugular. This should, however, teach us caution, for some very promising veterinary surgeons have been lost in this way. The path of propriety and of duty evidently is to put the farmer and horse-proprietor on their guard. The experience of every age, and I would say of every man who has seen country practice, teaches him that a glandered horse can rarely remain long among sound ones, without serious mischief ensuing.

Precautions proper to be Adopted.—What precautions then shall we advise? Remove the source of evil. Sell, or, rather, destroy the glandered horse. Will this be sufficient? No, far from it, for sound horses, weeks and months afterwards, being put in a stable whence a glandered one had been taken, have speedily become glandered. Some of the discharge from the nose has remained about the manger or rack or partition, which although dried up, may be readily softened by the breath of the new horse, or in the act of nibbling. Shall we then pull down the stables, or at least gut them, and plaster them afresh, and have new wood-work? There is no necessity for all this destruction and expense. Let the halters and head-gear and bridles be burned; and the clothes washed and baked; and the pails newly painted, and the racks and manger thoroughly scraped, and then washed well with soap and water and sand, and afterwards well washed with chloride of lime and water, in the proportion of a pint of the strong solution to a pailful of water; and let the walls be well scraped and washed with the chloride of lime and water, and then well lime-washed; and the floor be first thoroughly scoured and then sluiced with the chloride, and every possibility of danger will be removed.

The treatment of glanders will be considered in our next lecture.

Temperature of Paris.—According to a series of meteorological observations made for more than a century, the average temperature of Paris has been 8 deg. above the freezing point of Reaumer. During 135 years, there has been only three instances of a whole month having passed without rain at Paris. The last was in January 1810.—The sewers of Paris carry daily to the Seine about 180,000 cubic metres of water proceeding from rain and the fountains.

THE GARDENER.

[From Bridgeman's Gardener's Assistant.]

ON THE CHOICE OF FRUIT TREES IN THE NURSERY.

[Continued from page 295.]

PEARS.

The first 18 are Summer, the next 24 Autumn, and the last 18 Winter Pears.

1. *Musk Robine, Poire à la Reine, La Princesse, Queen's Pear, Muscat Robert, Poire d'Ambre.*—Fruit small, and of yellow colour; it ripens in July, and continues to the end of August; of a rich musky flavour, a great bearer and much esteemed dessert fruit.

2. *London Sugar.*—This fruit is below medium size; colour greenish yellow, tinged with brown; form turbinate narrowed at the crown; flesh tender, melting saccharine, of a rich musky flavour; an excellent early fruit, and very productive. Ripe in July.

3. *Madeleine, Magdalene, Citron des Carmes, Early Chaumontelle.*—This pear is of medium size, pale yellow, with an occasional blush next the sun; flesh white, melting, perfumed. A fine old fruit, ripe at the end of July.

4. *Premature.*—A new pear, about the size of the Crawford, but more juicy and delicious, and remarkably early; it commands a good price in the markets of Edinburgh, Scotland, and is reputed a most superior early fruit.

5. *Jargonelle, Epargne, Beau Present, Saint Samson, Grosse Cuisse Madame, Saint Lambert, Poire des Tables des Princes.*—Fruit rather large, oblong, of a pale green colour; flesh melting, juicy, with a slightly acid, rich and agreeable flavour. It ripens early in August, is one of the most productive of all pears, and the very best in its season.

6. *Cuisse Madame, Epine d'Ete, Fondante Musque, Satin Vert, Satin Green.*—Fruit of smallish size; greenish yellow at maturity; pyramidal; flesh melting, juicy, musky, rich, and excellent. Ripe by the middle of August.

7. *Green Chissel*—Fruit nearly globular; skin green, but slightly brown next the sun; flesh gritty, saccharine, a little perfumed; the fruit grows in clusters, and ripens early in August. The tree is of feeble growth, but very productive.

8. *August Muscat, Aurate, Muscat d'Aout, Musk, or Spice.*—Fruit of medium size; turbinate, flattened; colour yellow, but light red next the sun; flesh breaking, saccharine and perfumed. It succeeds tolerably on the quince, and ripens early in August.

9. *Cassolette, Friolet, Lechefron, Muscat Verd Poire de Sillerie, Verdasse, Green Muscat.*—A small pyriform fruit, of a bright green colour, slightly red next the sun; flesh breaking, of a sweet and musky flavour; ripens in August.

10. *Sabine d'Ete.*—This pear is of pyramidal form, terminating in a round blunt point at the stalk; colour yellow; but fine scarlet next the sun; the whole surface smooth, regular, and polished; flesh white, melting, juicy, and highly perfumed, the tree is an abundant bearer, and ripens its fruit in August.

11. *Seigneur d'Ete.*—Fruit above the middle size; a blunt oval; colour fine orange, but bright scarlet next the sun, and marbled; flesh melting,

free from grit; a rich and beautiful pear. The tree is handsome and bears well; its fruit ripens early in September.

12. *Rousselet de Rheims, Petit Rousselet.*—Fruit small, pyramidal, greenish yellow at maturity, but brown red next the sun, with russetty spots; flesh half beurre, fine, very perfumed. Good to put in brandy and to dry. Ripens end of August.

13. *Williams' Bonchretien, Bartlet.*—This fruit originated with a Mr. Wheeler in Berkshire, England, but was subsequently extensively propagated by Mr. Williams near London—hence its name. The fruit is large, oblong; the stalk thick and fleshy, an inch long; the colour at maturity, yellow tinged with red; flesh whitish, very melting, and delicate; juice perfumed, sweet and abundant. Tree very productive, and fruit ripe at the end of August.

14. *Windsor, Cuisse Madame*, of the French. A middle sized oblong pear; colour green, but brownish red next the sun; half melting, sweet, a little musky, rather coarse; ripe by the end of August.

15. *Summer Bonchretien, Bonchretien d'Ete, Gracioli*, of the French.—Fruit very large, irregular, knobby; skin smooth, of pale yellow colour, but slightly red next the sun; flesh whitish yellow, firm and breaking; juice sweet and very agreeable. It ripens early in September.

16. *Summer Bergamot, Hamden's Bergamot, Milan Blanc, Bergamot d'Ete, Milan de la Beuvriere.*—Fruit of medium size, globular, depressed; colour greenish yellow, russetted and speckled next the sun; flesh melting, juicy, saccharine and high flavoured. At maturity by the middle of September.

17. *Dearborn's Seedling.*—This new variety originated in the garden of the Hon. H. A. S. Dearborn of Roxbury. The tree is of vigorous growth; fruit of medium size, rounded at the crown, and regularly diminishes in a parabolic manner to the stalk; the skin is smooth, thin green with russet spots; at maturity it turns to a delicate yellow; flesh very melting, and of the finest flavour.

18. *Julienne, or Coxe, L'Archiduc D'E'te, Summer Beurre, Summer Dojenne, Summer St. Michael*, so called near Boston, *Bloodgood Pear* of New York.—Fruit medium size, smooth, bright yellow at maturity, with a faint blush next the sun; form rather ovate, tapering towards the stalk; flesh perfectly melting, rich and juicy. The tree bears young and most profusely, and matures its fruit early in September.

19. *Autumn Colmar.*—Fruit middle size, oblong; of a pale yellow colour, with much thin russet next the sun; flesh rather gritty but mellow, with a sugary and slightly perfumed juice.—A new, hardy, flemish variety, ripening its fruit in October.

20. *Belle et Bonne, Schone und gute, Belle de Bruxelles.*—"A havest pear, magnificent," very large, globular, depressed, the stalk long; skin greenish yellow, but next the sun yellow, with spots of russet; flesh white, sweet, exceeding rich and agreeable; perfumed. The tree is very productive, and the fruit ripens in September.

21. *Moor Fowl Egg.*—Fruit small, globular, ovate, swollen in the middle, orange brown next the sun, with spots of russet; flesh yellowish white, a little gritty, tender mellow, saccharine, a little perfumed. This is a hardy Scotch fruit, ripe end of September.

22. *Bezy de Montigny, Trouve de Montigny.* Fruit medium size, pyramidal, compressed towards the summit; colour yellow; flesh white, a little gritty, very melting; sweet, musky. It succeds on the quince. Ripe in September.

23. *Elton.*—A pear of medium size, oval form, broadest towards the crown; colour greenish russetty gray, but russetty orange next the sun; flesh breaking, and of an excellent flavour. Ripe in September.

24. *Delices d'Ardenpont, Delices d'Hardenpont, De Toulouse.*—Fruit medium size; skin a little thick, smooth, green, but yellow at maturity; flesh white, nearly melting; juice pleasant, sweet and abundant. Ripe in October.

25. *Seckle.*—An excellent native fruit, size varying from small to medium; colour varying from yellowish to brownish russet; but generally red next the sun; flesh of a melting, spicy, and of a most extraordinary rich and delicious flavour. It ripens the middle of September, and the fruit grows in clusters, in great abundance.

26. *Urbaniste.*—The fruit is pyramidally ovate; skin pale green, inclining to yellow; flesh white, but reddish yellow next the core; it is quite melting, juicy, and very sweet, with a little perfume. It ripens from the middle of September to November.

27. *Marie Louise.*—Fruit oblong, tapering towards both ends; size varying from medium to large; skin nearly smooth, yellowish green, and cinnamon coloured russet; flesh white, melting, juicy and rich. It ripens in October, and is described as an excellent fruit.

28. *Doyenne Santelete.*—A new fine handsome Flemish pear. Fruit above the middle size, pyramidally oblong; skin pale green, speckled with gray russet; flesh white, a little gritty, but tender; juice saccharine, with a slight musky perfume. The tree is hardy, and ripens its fruit early in October.

29. *Gray Doyenne, Red Doyenne, Doyenne Gris, Doyenne Roux, Doyenne d'Automne.*—Fruit medium sized; colour bright crimson russet, but red next the sun; flesh yellowish white, melting, saccharine, rich and of excellent flavour. Season, October and November.

30. *Ashton Town.*—The fruit is small, of a greenish colour, spotted with russet; the flesh is melting, high flavoured, richly sugared and perfumed. It is in perfection in October and November.

31. *Autumn Bergamot, Common Bergamot, York Bergamot.*—Fruit globular depressed, the skin rough, yellowish green, and dull brown; flesh pale, melting, juicy, sugary, and perfumed; ripe in September and October. A first rate pear.

32. *Golden Beurre or Bilboa.*—Fruit of medium size; oblong; colour a bright golden yellow, with patches of russet; perfectly melting and of fine flavour. A beautiful fruit, a great bearer, and worthy of cultivation.

33. *Hacon's Incomparable.*—Fruit middle sized, of pale yellow colour, mixed with green, partially covered with orange russet; flesh yellowish white, slightly gritty, but very tender, juicy, sweet and rich; and possessing a high musky and perfumed flavour. The tree is a great bearer, and the fruit excellent, and is in perfection in November and December. A silver medal was given for a specimen of this fruit, as a prize, in England, 1830.

34. *Duchess of Angouleme, Duchesse d'Angouleme.*—A pear of first rate excellence. Form roundish, oblong, tapering towards the stalk; skin dull yellow, with broad russet patches; flesh rich, melting, very juicy, and high flavoured, with a most agreeable perfume. Specimens of this fruit have been seen in England, weighing twenty-two ounces. In perfection in November and December.

35. *Green Sylvange, Sylvange Vert, Bergamotte Sylvange.*—A most superior pear, above the medium size, of green colour, skin rough, and speckled with gray or black. The flesh is greenish near the skin, white in the centre, soft, saccharine and juicy. Fruit in perfection from October to January. The tree is a great bearer, and specimens of the fruit have been known to weigh thirteen ounces.

36. *Bishop's Thumb.*—Fruit over medium size, very oblong; it is twice as long as broad, and tapers to its summit; colour dark green, and brownish red, with iron coloured russet; flesh yellowish green, melting, juicy, rich and excellent; ripening in October.

37. *Brown Beurre, Beurre Rouge, Beurre d'Or, Beurre Doie, Beurre du Roi, Beurre d'Amboise, Isambert, Red Beurre, Golden Beurre.*—This was formerly considered the best of all pears. Fruit rather large, of greenish yellow, and dusky red colour, covered with thin russet; flesh melting, buttery, rich and excellent. In perfection in October, and will often keep till January.

38. *Princesse d'Orange, Princess of Orange.* The fruit is roundish; the skin bright reddish orange russet; flesh yellowish white, sugary and rich, in some seasons perfectly melting, but occasionally a little gritty. A beautiful pear, and of good quality in October.

39. *Swan's Egg.*—Fruit small, oval, turbinate; colour yellowish green and dull russetty brown; flesh tender and melting, with a rich saccharine, musky flavour. An excellent fruit, ripe in October. The tree is remarkably tall, upright, vigorous, and productive.

40. *Charles d'Autriche, Charles of Austria.*—A fine and beautiful fruit, large, three and a half inches long, and three inches broad; colour greenish yellow, with brown spots and partly russetted; flesh white, melting, juicy, and delicious. Ripe in October.

41. *Gansel's Bergamot, Broca's Bergamot, Ives's Bergamot, Bonne Rouge.*—Fruit varying from medium size to large; ovate, flattened; colour dull green, slightly red next the sun; flesh white, melting, sweet, rich and high flavoured. A delicious pear, ripe in October and good till Christmas.

42. *Napoleon, Medaille, Sauvageon Liart.*—Fruit large, form of the Colmar; skin smooth; colour bright green, but at maturity, pale green; flesh very melting, with an unusual abundance of rich agreeable juice. At perfection in October and November.

43. *Beurre d'Aremberg, Beurre d'Arembert, Duc d'Aremberg, Poire d'Aremberg, Beurre Des-*

champs, Beurre Orphelins of Deschamps.—The English and French writers speak of this pear as one of the best in cultivation. The tree is a great bearer, comes early into cultivation, and the fruit will keep till March Fruit large, turbinate; skin of a delicate pale green, dotted with russet, which becomes a deeper yellow at maturity; flesh whitish, fine, very juicy, perfectly melting, and very extraordinarily rich, sweet, high flavoured and excellent.

44. *Easter Bergamot, Bergamotte Bugi, Bergamotte de Paques, Bergamotte d'Hiver, La Grillieu, Paddington, Tarling, Winter Bergamot.*—Fruit rather large, short, roundish turbinate; swollen at the crown; colour yellow at maturity; half beurre; sweet and good. In perfection from December to May.

45. *Francreal, Fin, or d'Hiver, Francreal d'Hiver.*—The tree is very productive; itsucceeds well on the quince; fruit globular; colour yellowish green, but brownish red next the sun, and a little russetty; good to cook from October to midwinter.

46. *Beurre Diel, Diel's Butterbirne, Dorothee Royale, Beurre de Gelle, Beurre Royale, Poire de Melon.*—This ranks amongst the best of pears. The tree is of vigorous growth; fruit when in perfection, four inches long, and three inches broad; the skin at maturity is bright orange, with reddish russet; flesh clear white, tender, melting, and juicy, and of a delicious aromatic flavour; from November to January.

47. *Beurre Rance, Beurre Epine, Hardenpont de Printemps.*—This is said to be a first rate pear. The tree is vigorous and a good bearer; fruit middle sized, oblong; skin deep green; flesh green, melting, having a delicious rich flavour, with very little acid. It shrivels in ripening, but will keep till April.

48. *Gloria, Colmar d'Hiver.*—A name implying every thing that is excellent. A melting pear of superior quality; shape varying from nearly globular to pear shaped; color yellowish green; flesh firm, juicy, and of excellent flavour; at perfection in January and February.

49. *Holland Bergamot, Bergamotte d'Holland, D'Alencon.*—Fruit very large, globular, but broadest at the crown, flattened; of greenish yellow colour; flesh half breaking, juicy, and high flavoured; it keeps till May, and succeeds on the quince.

50. *Saint Germain, Inconnue la Fare.*—This celebrated ancient fruit is large, of a green colour, covered with russet spots; at maturity a yellowish cast; its flesh very melting, juicy, saccharine, slightly acid, and delicious; it ripens in November, and may be kept till March.

51. *Monarch.*—A new pear considered by Mr. Knight as without a rival. The tree is represented of rapid growth, and an abundant bearer; fruit large, of an extraordinary musky flavour, and deemed excellent for Perry. Season in England, December and January.

52. *Colmar, Poire Manne, Bergamotte Tardive, Incomparable.*—This fruit is rather large; skin smooth, of a green colour, changing to yellow at maturity; form pyramidal; flesh melting, juicy, saccharine, and of excellent flavour; the fruit is in perfection from November to February.

53. *Easter Beurre, Bergamotte de la Pentecote, Beurre d'Hiver de Bruxelles, Doyenne d'Hiver, de Bruxelles, Bezi Chaumontelle Tres Gros.*—Of all the late keeping pears, this is considered the best, (for England.) Fruit large, roundish, oblong; color green, but yellow at maturity, with specks of russet brown; flesh yellowish white, perfectly buttery and melting, and extremely high flavoured; it is eatable in November, and will keep till May; it is a most profuse bearer, on a quince stock.

54. *Passe Colmar, Fondante de Panisel, Passe Colmar Gris dit Precel, Poire Precel, Passe Colmar Epineux, Beurre Colmar Gris dit Precel, Beurre d'Argenson, Chapmans.*—A most valuable pear, of medium size, conical, flattened next the eye; skin at maturity yellowish, sprinkled with russet, a tinge of red next the sun; flesh yellowish, melting, juicy, rich and excellent. The tree is a good bearer, and the fruit is in perfection from November to February.

55. *Flemish Bon Chretien, Bon Chretien Nouvelle Espece.*—Fruit large, oblong, turbinate; skin at maturity yellow, mottled with russet next the sun; flesh yellowish white, breaking, a little gritty, but mellow at maturity; juice saccharine, with a slight musky perfume; season from November till February.

56. *Glot Morceau, Gloux Morceaux.*—A very large Belgic variety, of great excellence; fruit of ovalish form, pale green color, inclining to yellow, with russetty specks and blotches; flesh whitish, firm, very juicy and excellent; in perfection from November to March.

57. *Poire de Anana, Poire d'Ananas.*—A new Flemish variety, held in high esteem; a winter fruit, of medium size, very handsome, melting, with a fine pine apple flavour, (hence its name Ananas;) ripening in November, and good till March; the tree is of dwarfish habits, and flowering freely, and at the extremity of the branches.

58. *Winter Bonchretien, Bonchretien d'Hiver, Poire d'Angoise.*—Very large, colour at maturity yellow, with a slight stain of red next the sun; form truncated, or pyramidal; flesh breaking, rather sweet and juicy. This variety, though enormously large, is very liable to crack, but is sometimes preserved sound till May.

59. *Chaumontel, Bezy de Chaumontelle, Beurre d'Hiver.*—This noble old variety is a fruit varying in size, from large to very large; its colour at maturity yellow, tinged with red next the sun; its form variable; flesh melting, juicy, sweet, musky, excellent; season from November to February.

60. *Cardinale, Poire d'Amiral, Admiral.*—The tree is of medium vigour, its young wood of medium size, and of a red color; a superb oblong pear, of a pyramidal form; yellow in the shade, but beautiful red next the sun; flesh white, half melting, coarse grained, but very juicy, sweet and agreeable; it keeps till March, and merits to be better known.

Ingenious Expedient.—A gentleman observing an Irish servant girl, who was *left handed*, placing the knives and folks in a similar position on the dinner table, remarked to her that she was laying them *left handed*. "Och indade!" said she, "so I have; be pleased, sir to help me turn the table round."

MISCELLANEOUS.

Improved bee hives.—The box or hive to be made of inch plank, say, about 2 feet 3 inches by 12 inches wide; the upper part of the box to be partitioned off, allowing just space sufficient to admit a drawer of about 10 by 12 inches deep. This drawer is to slide upon the horizontal position, and to be made to fit the inside of the box exactly. In the bottom of the drawer, a hole is to be made, say about one and a half inch in diameter, and a corresponding one in the partition, so as to allow the bees to pass up from the lower part of the hive into the drawer. In the outer side of the drawer, a pane of glass is to be fixed, to ascertain when the drawer is filled with honey. Over the glass, a sliding shutter is to be placed, to exclude the light: or the upper end of the plank, forming the back side of the box or hive, may be sawed off, and fastened with a hinge and button, so as to answer the place of the sliding shutter. When the honey is wanted for use, remove the shutter from before the glass, and having ascertained the drawer is filled, introduce a little smoke into the top of the drawer by means of a tobacco pipe; and when the bees have been driven into the lower part of the hive, separate the drawer and partition, with a case knife, remove the drawer, and having emptied it, return it to its place again, and the bees will commence working in it immediately. By this method the honey will be always pure, without bee-bread or dead bees, and not a single bee need be destroyed; and moreover, it has been tested by many years trial, and found to answer the intention completely.

P. S.—The drawer should have a top screwed on, so as to be more readily opened when the honey is to be taken out; and any space between the drawer and the sides, or the top of the hive, should be filled by some kind of cement, so as to prevent insects from making a lodgment within the hive.—*Farmers' Register.*

A just Sentiment happily expressed.—"Whether I shall ever succeed in being useful," said Darce, "is, I fear, very doubtful, but I have determined not to be idle. *A lonely man like me cannot afford to despise himself.*"

The Boston Gazette says:—"One of the Pillars intended for the new Court House arrived in town last evening about ten o'clock. It was drawn by 65 yoke of oxen and 10 horses, and the *cavalcade* was frequently cheered as it passed through Washington st.

Did you, farmer, commence with the New-Year in keeping an account of your business?

CONTENTS OF THIS NUMBER.

Thanks to "Agricola"—New periodicals—Chester county Beef—Suggestions to Horticulturists—Change in articles of commerce on the Erie Canal—Cornstalk fodder—Modern improvement of the Soil—Manure and product in return——Root crops—Silk culture—Wheat land—Improvement of Soil—Youatt's Lecture on Glanders—Temperature of Paris—On fruit trees—Scrap—Improved bee-hives—Scraps—Prices curent and advertisements.

BALTIMORE PRODUCE MARKET.

☞ *These Prices are carefully corrected every* MONDAY.

	PER.	FROM	TO
BEANS, white field,	bushel.	——	3 00
CATTLE, on the hoof,	100lbs.	4 75	5 25
Slaughtered,	"	3 00	4 00
CORN, yellow,	bushel.	——	——
White,	"	——	——
COTTON, Virginia,	pound.	17	——
North Carolina,	"	14	16
Upland,	"	17	18½
FEATHERS,	pound.	35	37
FLAXSEED,	bushel.	1 62	1 70
FLOUR—Best white wheat family,	barrel.	6 00	6 50
Do. do. baker's	"	5 50	6 00
Do. do. Superfine,	"	4 75	5 00
Super Howard street,	"	4 62	4 75
" " wagon price,	"	4 50	——
City Mills, extra,	"	4 87	5 00
Do.	"	4 70	——
Susquehanna,	"	——	——
Rye,	"	——	——
GRASS SEEDS, red Clover,	bushel.	5 50	6 00
Timothy (herds of the north)	"	3 00	3 50
Orchard,	"	3 00	3 50
Tall meadow Oat,	"	2 00	2 50
Herds, or red top,	"	1 25	——
HAY, in bulk,	ton.	16 00	——
HEMP, country, dew rotted,	pound.	6	7
" water rotted,	"	7	8
HOGS, on the hoof,	100lb.	5 00	——
Slaughtered,	"	5 50	——
HOPS—first sort,	pound.	15	——
second,	"	13	——
refuse,	"	11	——
LIME,	bushel.	30	33
MUSTARD SEED, Domestic,	"	5 00	6 00
OATS,	"	33	34
PEAS, red eye,	bushel.	——	——
Black eye,	"	87	1 00
Lady,	"	100	——
PLASTER PARIS, in the stone,	ton.	3 12	——
Ground,	barrel.	1 37	——
PALMA CHRISTA BEAN,	bushel.	1 50	1 56
RAGS,	pound.	3	4
RYE,	bushel.	——	——
TOBACCO, crop, common,	100 lbs	4 25	5 00
" brown and red,	"	5 00	7 00
" fine red,	"	7 00	9 00
" wrappery, suitable for segars,	"	6 00	12 00
" yellow and red,	"	8 00	12 00
" yellow,	"	9 00	12 00
" fine yellow,	"	12 00	16 00
Seconds, as in quality,	"	4 00	5 00
" ground leaf,	"	5 00	9 00
Virginia,	"	5 00	10 00
Rappahannock,	"	——	——
Kentucky,	"	6 00	9 00
WHEAT, white,	bushel.	——	——
Red,	"	——	——
WHISKEY, 1st pf. in hhds	gallon.	28½	29½
" in bbls	"	28	——
" wagon price,	"	——	——
WAGON FREIGHTS, to Pittsburgh,	100 lbs	——	1 50
To Wheeling,	"	——	1 75
		washed.	*unwash*
WOOL, Prime & Saxon Fleeces,	pound.	50 *to* 60	24 *to* 26
Full Merino,	"	44 50	22 24
Three fourths Merino,	"	37 44	22 24
One half do	"	33 37	22 24
Common & one fourth Meri.	"	30 33	20 22
Pulled,	"	31 33	22 24

A FINE BULL.

FOR SALE, a young Bull, ten months old, sired by the thorough bred bull Apollo. (of the Gloster Stock) and out of a very fine cow of seven-eighths Durham S. H. blood, consequently fifteen-six teenths Durham S. H., is for sale a bargain if immediate application be made; he is truly a splendid calf, and will be sold for $100 cash. Apply to I. I. HITCHCOCK,
jan 13 American Farmer Establishment.

BALTIMORE PROVISION MARKET.

	PER.	FROM.	TO.
APPLES,	barrel.	$3 00	$5 00
BACON, hams, new,	pound.	11	——
Shoulders,	"	8	9
Middlings,	"	——	——
BUTTER, printed, in lbs. & half lbs.	"	25	37
Roll,	"	15	25
CIDER,	barrel.	——	——
CALVES, three to six weeks old	each.	3 00	6 00
COWS, new milch,	"	17 00	30 00
Dry,	"	6 00	10 00
CORN MEAL, for family use,	100lbs.	1 50	——
CHOP RYE,	"	1 50	——
EGGS,	dozen.	19	20
FISH, Shad, salted,	barrel.	5 75	6 00
Herrings, salted, No. 1,	"	4 75	——
Mackerel, No. 1, 2 & 3,	"	5 12	7 00
Cod, salted,	cwt.	2 50	3 00
LAMBS, alive,	each.	1 25	2 00
Slaughtered,	quart'r	31	50
LARD,	pound.	8	9
ONIONS,	bushel.	62	75
POULTRY, Fowls,	dozen.	1 50	2 25
Ducks,	"	——	2 50
POTATOES, Irish,	bushel.	40	62
Sweet,	"	——	——
TURNIPS,	"	37	50
VEAL, fore quarters,	pound.	3½	4
Hind do.	"	6½	——

ADVERTISEMENTS

CHOICE AGRICULTURAL SEEDS, &c.

NEW Italian Rye Grass, and Pacey's perennial do. both suitable for the south; Sainfoin, finest Provence Luzerne, Dutch White Clover, Trefoil or Yellow Clover, New Crimson Clover, or Trifolium incarnatum; Orchard Grass, or Cocksfoot; Tall Oats Grass; Skinless Oats, Early Angus, Hopetown, and English Potatoe Oats, weighing 44 lbs. per bushel; superior Barley, large field Burnet, Timothy or Herds Grass, Vetches, Lentiles, Taylor's forty-fold Potatoe, now taking precedence of all others; early Nonpareil, Mercer, Kidney, and Pinkeye Potatoes, Potatoe Onion, white Italian Mulberry, large Riga Flax, Dyer's Madder, Woad and Weld; extra large Fuller's Teazel, large white field Carrot, the sweetest and most profitable for Cattle; red, yellow and white Mangold Wurzel, the two latter exceedingly sweet, and all very profitable for cattle, Turnips of every kind suitable for eattle and garden. All the foregoing seeds, and every other kind for the farmer, or for the kitchen and flower garden, will be supplied at moderate prices, comprising many superior new Vegetables never before offered to the public.

Among these are a number of very superior Cabbages, Lattuces, Peas, Beans, Onions, Radishes, Beets, Cucumbers, Squashes, Pumpkins, Spinach, Turnips, &c. introduced from the south of France, Spain and Italy, and particularly suited to a southern climate.—The following choice new Melons can now be supplied—Malta winter, with green flesh, rich and high flavored, and keeps till February; Netted Romana, Oval Romana, French Muscade, Cohansa, Imperial, Ispahan, Cyprian, Early Cantaloup, Green fleshed Sugar, Fine Japan Cantaloup, Dark Orange, and Embroidered Cantaloup, Scarlet Rock, Small Prescot, White Rock, Green Pine apple, Netted Cantaloup, and some others, comprising a luxurious addition to the dessert.—All applicants will have the Seed Catalogue, and other Catalogues sent them *gratis*, and orders sent direct per mail for Seeds, Fruit and Ornamental Trees, Flowering Plants, Green House Plants, Bulbous Roots, double Dahlias, &c. will have prompt attention, and the packages forwarded precisely as designated—Chinese Mulberry, or Morus multicaulis trees at reduced rates, and cuttings in proportion. Grape Vines, and cuttings of all kinds at moderate prices in any quantity.

N. B. The Grass Seeds, &c. in quantities will be supplied much below the usual rates.

WM. PRINCE & SONS.
Linnæan Garden and Nurseries, near New-York.
jan 20 2t

GAMA GRASS SEED

JUST received, and for sale at this Establishment—Price 50 cents per ounce.

GRAPE VINES.

HERBEMONT S Madeira, one, two, and three years old, from 25 cents to 75 each.
Isabella, two and three years old, at 25 to 50 cts each.
Catawba, one year old, 25 cts. each.
White Scuppernong, two years old, at 37½ cents each.
Sultana, one year old, at 50 cts. each.
Woodson, two years old, at 37½ cents each.
Red Bland, one year old, at 25 cts. each.
Are for sale at this establishment, and will be well packed to go any distance. no. 25

BULBOUS ROOTS.

HYACINTHS, Tulips and a general assortment of Bulbous Roots, suitable for the present season, for sale low at this establishment by
Oct. 28. I. I. HITCHCOCK.

MORUS MULTICAULIS.

THE subscriber has on hand a few hundred of this celebrated Tree, unrivalled in the quality of its leaves as food for the silk worm, for which he is ready to receive orders (accompanied by the cash) with *particular* directions for the delivery of the trees on or after the first of Nov. next. Price 50 cents each, $5 per dozen, or $40 per hundred.

The success and ease with which this tree is propagated, the extraordinary quickness of its growth, the superiority of its leaves over *all* others for the silk culture, and its uncommon luxuriance and beauty, altogether recommend it to the favourable notice of *every farmer* as a most valuable acquisition. I. I. HITCHCOCK,
aug. 26 Amer. Far. Estab.

AMERICAN FARMER ESTABLISHMENT,

No. 16 *S. Calvert street, Baltimore, Md.*

COMPRISING a Stock and Experimental Farm; a Nursery and Seed and Flower Garden; a Store for the sale of Field and Garden Seeds and Agricultural Implements and Books; a general Agricultural and Horticultural Agency; the Publication Office of the "Farmer & Gardener, and Live Stock Breeder & Manager," and of "Hints to Farmers;" and an Office of APPLICATION for Farmers, Gardeners, Overseers, Managers, &c.

I. IRVINE HITCHCOCK, *Proprietor.*

This establishment is now in full and successful operation, nearly every department, especially that of seeds, being well supplied with articles of the most desirable quality.

Orders by wholesale or retail will be promptly executed on terms that cannot fail to give entire satisfaction to purchasers.

As the limits of an ordinary advertisement preclude the possibility of conveying an adequate idea of the variety and the value to the cultivator and dealer in seeds, of the contents of this establishment, a comprehensive and descriptive PROSPECTUS AND CATALOGUE has been printed and will be sent gratis to any gentleman who will transmit to the proprietor his address (post paid) for that purpose.

TERMS OF THIS PAPER.

1. Price five dollars per annum, payable in advance. ☞When this is done, 50 cents worth of any kind of seeds on hand will be delivered or sent to the order of the subscriber with his receipt.

2. The *manner* of payment which is preferable to any other for distant subscribers, is by check or draft on some responsible party here, or else by remittance of a current bank note; and to obviate all objection to mail transmission, *the conductor assumes the risk.*

3. Subscriptions are always charged BY THE YEAR, and never for a shorter term. When once sent to a subscriber the paper will not be discontinued (except at the discretion of the publisher) without a special order, on receipt of which, a discontinuance will be entered, to take effect AT THE END of the current year of subscription.

4. Subscribers may receive the work either by mail in weekly numbers, or in monthly or quarterly portions; or else in a volume (ending in May annually), handsomely pressed, half bound and lettered (to match with the American Farmer) by such conveyance as they may direct: but the $5 must in all these cases be paid in advance.

☞ADVERTISEMENTS relating to any of the subjects of this paper will be inserted once at one dollar per square, or at that rate for more than a square, and at half that rate for each repetition.

THE FARMER & GARDENER;

AND LIVE-STOCK BREEDER & MANAGER.

CONDUCTED BY I. IRVINE HITCHCOCK, AND ISSUED EVERY TUESDAY FROM THE AMERICAN FARMER ESTABLISHMENT, AT $5 PER ANNUM, IN ADVANC

No. 39. **BALTIMORE, JANUARY 27, 1835.** **Vol. I**

☞This publication is the *successor* of the late
AMERICAN FARMER,
(which is discontinued,) and is published at the same office, at five dollars per year, payable in advance.
☞When this is done, 50 cents worth of any kind of seeds on hand will be delivered or sent to the order of the subscriber with his receipt.

American Farmer Establishment.

BALTIMORE: TUESDAY, JANUARY 27, 1835.

SKINLESS OR HUSKLESS OATS.—A writer in the Cultivator, says he has raised these oats now three years, beginning with about a table spoonful of the seed in 1832, which he sowed in drills, in his garden, and did the same the second year with the product of the first. This year, being the third crop, he sowed broad-cast in a field precisely as he does the common oat. The huskless oats, mature somewhat earlier then the common; the heads are considerably larger, and more compact, yielding much more abundantly by measure, and that measure weighing full one third more than that of the common oat. They are well adapted to our soil and climate, are cultivated precisely like the common oat, but require only one half the usual quantity of seed. When threshed, they are entirely free from husk and look precisely like the common oat hulled.

We do not remember to have seen the occupation of the farmer eulogized with more felicity than in the following article from the New England Farmer:

AGRICULTURE AND ITS ADVANTAGES.

Of the various occupations and professions which have engaged the attention of mankind, there is none which seems to be so pre-eminently useful, so honorable, in short so compatible with all our interests, as the cultivation of the earth. There is none which has so many resources within itself, or which can furnish from its own means, the supplies for all our necessary wants. Food, raiment, and luxuries innumerable, are the FRUITS of the farmer's labor and care; and in their train follow health, happiness and independence.

And in view of these facts, for facts they are, are we not led to wonder that so many of our young men are placed behind the counter, to learn the arts and mysteries of the scales or yard-stick, to deprive themselves of the bloom and freshness of youth, and bring early and deep *furrows* of care and anxiety on their brows, by the difficulties and perplexities attending the prosecution of mercantile pursuits, when so many and so strong inducements are held out for them to engage in that profession which was the earliest employment of man, and which, as the light of science is spread abroad, and improvements are made in the art, is becoming more interesting, more profitable, and at the same time less laborious.

With what different feelings do the farmer and the merchant leave their pillows in the morning! The one buoyant with health and spirits, goes forth with the first dawn of day to his cheerful labors in the field, while the other, after a restless and perhaps sleepless night, walks in a sober mood to his counting-room, anticipating with fearful forebodings the insolvency of his customers, or ill-success of a voyage.

With what honest pride, and heart-felt satisfaction does the farmer look at his luxuriant fields, his richly laden orchards, and his growing flocks, with the happy assurance that with every returning season his substance is increasing, that he is above want, and far from feeling the fluctuations of merchandize, or the embarrassments of trade.

Who, that has seen the hale and vigorous ploughman whistling along as he turns up the furrow, and has not sighed for the joys of pastoral life? Or, who has not enjoyed the privilege of witnessing the internal arrangements of a thrifty farmer's establishment, and observed the care and attention evinced in all her domestic economy by his industrious and frugal wife, and has not coveted the happiness and independence of the farmer? Much as the wealth and prosperity of a nation may be advanced and promoted by its commerce and manufactures, still we are constrained to look upon agriculture as its source and foundation. It is absolutely necessary to our comfort and existence. For let men pursue what other business they may, they are still dependent on the farmer for what they eat, drink, and wear.

And, suppose the farmer by way of relaxation, occasionally deviates from his regular routine of duties, and engages a little in horticulture, or the cultivation of the choicer kinds of fruit, will he not be repaid a thousand fold for the time and labor bestowed on a few trees, vines, or shrubs?

And farther, will not the appearance of his house and "front door yard" be immensely improved; himself and family enjoy a large amount of pleasure, and gratification, not to speak of the frequent lessons of neatness and order which his children would learn by the cultivation of a few varieties of flowers. And will not these silent monitors which so beautifully remind us, that

"The hand that made them is divine,"

also have a moral tendency, and teach us to look

"Through nature up to Nature's God."

Tufton Lodge, Jan. 1835. M.

Statement of the late cold weather in the different places.

At Lebanon, N. Y. 32 deg. below Zero, Sunday, Jan. 4th 7 A. M.—some say to 40.—Lowest in the lowest places.

Utica, N. Y.	24°	below	zero, Jan.	4
Albany, N. Y.	23	"	"	"
Portland, Me.	24	"	"	
Philadelphia,	4	"	"	Jan. 5
Boston,	15	"	"	"
Worcester, Ms.	19	"	"	"
Portsmouth, N. H.	20	"	"	"
Saco, Maine,	28	"	"	"
Salem, Mass.	17	"	"	4
N. Haven, Ct.	23	"	"	"
Hartford,	25	"	"	"
Norwich,	24	"	"	"
Goshen, N. Y.	32	"	"	5
Newark, N. J.	11	"	"	"
Pittsfield,*	32	"	"	4
Haverhill,	33	"	"	"
Kinder Hook N.Y.	29	"	"	4-7A M.
Catskill,	28	"	"	"
Lowell, Mass.	29	"	"	"
Baltimore, Md.	10	"	"	"
Washington,	16	"	"	"
Dunstable,	38	"	"	"
Bangor, Maine,	39	"	"	"
Dover, N. H.	28	"	"	"
Greenfield, Ct.	36	"	"	"
Newbury, Vt.	33	"	"	"
Kennebeck, Me.	35	"	"	4
Pottsville, Penn.	24	"	"	5

At Charlottsville, Ky. 1 degree above zero, Jan. 5.

*Coldest ever known.

Singular Circumstances.—A hog measuring 8 feet, was slaughtered on Thursday last in this city. He was attacked the night previous to being killed, by *rats*, and at least three pounds of his hind quarters eaten by them.—[*Prov. News.*

THE FARMER.

Science of Agriculture.—In a very sensible address, delivered before the Norfolk (Va.) Agricultural Society, on the 6th of December last, by its president, Col. Wm. Garnett, we find the following excellent sentiments. Speaking of the means by which the members of that society might be useful to each other, and to the public, he says—

"One of the most obvious modes by which this can be accomplished, is by a free communication of all important facts relating to the subject of our science, which may come to the knowledge of any of our members. Much very important and highly useful information, it is to be feared, is withheld from the agricultural community, from an unwillingness that many persons have to appear before the public as authors, arising from a diffidence of their powers in the art of composition. This might be a good reason for such reserve, if the object of the writer was to make a display of his skill in the art of writing; but where nothing is contemplated but the communication of useful facts, the graces of composition may well be dispensed with. We shall never value the information that may be thus imparted to us, a whit the less for any deficiency in the polish of the style in which it may be conveyed; but will ever prize one useful and well attested fact, bearing upon the subjects to which the attention of our society is directed, to the finest theory, which the most brilliant imagination can suggest. All that is requisite in the communications, which we solicit, is a plain statement of the facts communicated, with such of the accompanying circumstances as may be necessary to enable us to draw correct inferences from them. Many of our members, we have no doubt, could aid us essentially by furnishing us with the result of their agricultural experience, and I trust that none, who have the ability, will, like the unprofitable servant spoken of in the scripture parable, prefer to bury their talent, rather than put it into useful circulation."

To set a good example, and induce others to come out, the worthy president gives *his* ideas on sundry important subjects, discoursing in the following manner.

Manner of applying manure.—"As may have been anticipated, from what was said in the commencement, I have but little worth communicating from the very slender stock of my own agricultural experience; nor have I as yet had the leisure to draw from the sources of information alluded to in the beginning. But there is one important fact in relation to the application of manure, upon which I can speak experimentally, and to which I will therefore call your attention, as I deem it much more deserving of consideration than it is generally thought. Some years ago, in reading the proceedings of an agricultural society, somewhere in the state of New York, I observed that the owner of a farm, who obtained a premium offered for the best managed farm in that part of the country, stated amongst other matters, in relation to his management, that for many years he had applied all his manure to the surface of his land after planting his crops, instead of previously ploughing it into the land, as had hitherto been his practice. Since then, I have applied the greater part of the manure I have collected in the same manner, and have invariably found the crops better than they were upon the land where the manure had been used according to the old method. This difference is much more manifest where coarse litter is used, than in the case of well rotted manure, and of a very dry season, I think I have witnessed a difference of at least one hundred per cent. in favor of the surface dressing, though I have never tested the matter by actual measurement. But during severe droughts I have seen the corn fired nearly to the shoot, upon land into which coarse litter had been ploughed previous to planting, when the corn which had the manure spread over the surface after planting, was perfectly green and flourishing. In further corroboration of the opinion herein advanced, of the superior advantage of an application of manure to the surface, over the practice of burying it in the land, I will mention one other fact. Soon after the appearance of some essays signed "*Arator*," and written by Col. John Taylor, a celebrated agriculturist, it was the practice of many farmers in the part of the country in which I then resided, to plough up the land, upon which they had penned their cattle during the summer, as soon as the cow pens were removed, to avoid the loss, which he had taught them to apprehend, from the evaporation of the manure if left exposed upon the surface of the land to the action of the sun and moisture. Whether from accident or design, it so happened, that some of the cow pens remained unbroken until the following year, when they were ploughed up to plant in corn, and much to the astonishment of those who had implicitly believed in the supposed loss from evaporation, it was found that this land produced much better than that which had been ploughed, as soon as the cattle had been taken off. The consequence has followed, that the practice of breaking up cow pens upon their removal, has been abandoned in the part of the country alluded to, I believe without a single exception. From my own experience, therefore, on this subject, as well as upon the testimony of several experienced farmers, whose experiments have led them to the same conclusion, I do not entertain the least doubt as to the superiority of the method of applying manure herein recommended, over the mode formerly used."

New-ground Coulter Plough.—"With regard to the implements of husbandry, I am not sufficiently acquainted with the state of agriculture in our region to know how far the modern improvements in this particular have been adopted with us. But I have been informed and believe, that very little attention has been paid, in this section of the country, to this important branch of rural economy. Being, however, almost entirely unacquainted with the extent of our deficiencies in this respect, I will postpone this subject for another communication, by which time I hope to be better acquainted with our wants, and the sources from which they can be supplied. But before I take my leave of it, I will briefly describe to you an implement much used, in the part of the country in which I formerly resided, in the preparation of newly cleared land for cultivation. It is called the new-ground coulter, and differs from those formerly used in that part of the country, in having a blunt edge in place of a sharp one. The advantage gained by this change is, that the roots are broken, and torn out of the earth, instead of being cut and left in the land; nor is it ever impeded in its progress, by sticking in the roots, as is frequently the case where the sharp edged coulter is used. Oxen are generally employed as better adapted to such work, where frequent stoppages occur, than horses; and a hatchet is carried on the break of the plough, to chop such roots as are too stubborn to be broken. The new-ground coulter is also much used to open furrows for planting corn; and for this purpose two short mould boards are fixed upon the upper part of the helve, while the coulter going several inches below the bottom of the furrow opened by the mould boards, prepares the land underneath for the reception of the small roots of the corn, as soon as it vegetates. Some farmers likewise use this plough for siding corn, in stiff land, preparatory to weeding; but in this case, it is used without any mould board. In short, I do not know a cheaper or more useful agricultural implement than the new-ground coulter, or one by which so great an amount of labor can be saved, at so little cost. I have seen large new-grounds completely prepared for the use of the ordinary plough, by running this coulter previously through the land; and the work of 15 or 20 hands which would have been otherwise employed for several weeks, in grubbing and hilling the ground, entirely saved. Mr. *Richard Baylor*, an officer of our society, has one of them, which I ordered for him, and I have had another made, at the request of Mr. *A. Foreman*, also one of our officers, which will furnish an opportunity to such as think the matter worth enquiry, to examine the plough for themselves. The construction is so simple, that the most ordinary blacksmith can make them by these models. In conclusion, I would remark, that few things are of more importance to the farmer than a judicious selection of the implements of husbandry, both as it regards the economy of labor, and the due preparation of the soil for cultivation. And if I have not been greatly misinformed, much is required in this department to place us upon the vantage ground occupied by our more enterprising and industrious brethren of the north, or even of many parts of our own state. I therefore recommend this subject to your particular attention. Much may be done to better our condition in this respect before we meet again, if we can but infuse new energy into our operations, and excite something like interest in agricultural pursuits in this and the neighboring counties. But candor compels me to add, that if we continue to manifest the same indifference to the well being and progress of our society, which has so far characterised our first efforts, we may at once abandon all hope of advantage to ourselves, or utility to the public, through the agency of this institution, which, without more spirited exertions than have yet been made, we may consider as virtually dissolved."

A Leaf from an Introductory Grammar of Agriculture. By D. F. Ames. [Communicated for the New-York Farmer and American Gardener's Magazine.]

What is Agriculture?

Agriculture is the science of cultivating the earth, for the purpose of producing the greatest amount of necessaries and auxiliaries to sustain life.

Is the cultivation of every kind of grain, fruit, and flower, denominated Agriculture?

No: the various branches have their peculiar appellations. The term Agriculture, or Husbandry, is generally confined to the mode of producing corn, grain, roots, and herbs, such as custom has made necessary to the sustenance of man and beasts.

How is the production of fruit named?

Pomonaculture.

What is the cultivation of flowers denominated?

Floriculture.

How is the cultivation of trees expressed?

By the word Arboriculture, which, like the former, is a word composed of the latin name of the thing cultivated, with an English termination.

What is understood by the term Horticulture?

Horticulture is generally used to express the raising of fruits and vegetables commonly called gardening.

What are the principal objects of choice in the commencement of a garden?

Soil and situation.

What is soil?

The surface earth that is worked by tillage or digging, for the reception of plants and seeds, is technically called the soil.

What are the component parts of soil?

All soils are composed of argil, sand, water and air, whatever may be their color or texture, and it is a due proportion of each that causes fertility, or an undue preponderance of one or more that occasions sterility or barrenness.

What is argil?

Argil is the soft mucous part of clay.

What causes the various colors of the earth?

The coloring of the soil is occasioned by a proportion of iron, or other metal, and is of little importance.

Describe an eligible situation for a garden?

A gentle slope to the south or south-east is preferred, well sheltered from the northerly winds, and contiguous to a pond or run of water.

Why is a slope or declivity preferred to a flat or level surface?

Because stagnant moisture is very injurious to most plants, and a level surface often retains the water.

What is the advantage of a pond, or run of water?

Both for the purposes of irrigation and the convenience of watering many plants, shrubs, and trees, that require artificial watering during very dry seasons.

What is irrigation?

Irrigation is an artificial mode of covering land by water for the purposes of fertilization.

How is it performed?

By various methods, but generally by damming up the stream, or altering its course so as to overflow the intended space.

At what season is this generally done?

During the winter, fall, or spring; while vegetation is in a dormant state.

How is it supposed to benefit vegetation?

By removing the excrementory matter rejected by the plants as food, and by decomposing and depositing fresh material to renew the soil.

Is it necessary to renew or refresh all soils?

Repeated cropping will exhaust the soil, which must then have an additional supply of food for plants, either by applying manures that contain it, or by a dressing of lime or some other substance, calculated to prepare fresh food from matter already in the soil.

What is the soil that will require the most manure?

A light porous sand is soonest exhausted, as the food held by absorption will be either washed down too deep to be taken up by the spongeoles of the plants, or it will be evaporated by the sun and air.

What is the food of plants?

The specific food of plants is not satisfactorily ascertained; they were formerly supposed to take little save water from the soil, but modern science has discovered that most soluble substances are taken up with the water from the soil, and those unsuitable are ejected again by the roots.

Do all plants require the same food?

No: different plants require different food as may be seen by the continuing one crop on a place without additional manure, until it will no longer bring it to perfection; a different description of plant may yet be raised in good quality from the same land without additional manure.

What is the effect of manure?

Manures supply moisture, and retain it in the soil together with carbonic acid gas, potash, and other substances, for the nourishment of plants, all of which must be in a perfect liquid state to become food for plants.

How do plants imbibe nourishment?

Plants derive their food principally from the earth, and absorb it, or take it up, by little spongeoles, or mouths, that are placed on minute fibres, at the extremities of the roots."

[From the Maine Farmer.]

Culture of Silk.—It is some time since we jogged the elbows of our readers upon this subject. But we have nevertheless kept watch of the progress of the business, and are glad to see it increasing, though somewhat slowly. Several people in Maine have begun the business with a success proportioned to their exertions. One person, Mr. Thomas Jackson, of Winthrop, succeeded in raising two crops during the past season. The last crop of worms were kept in a warm room. To pursue the business however to advantage, it will be necessary to prepare for keeping not less than one hundred thousand worms. This will take, we hardly know how many trees, but we will say 3000, which may be set out thickly on an acre of land. Some have calculated this amount of trees will feed a million when they have arrived to the age of five years. If they will, so much the better.

Every year witnesses an immense amount of money sent out of the United States to pay for this article. According to the Treasury Report for 1833, the value of silks brought into the United States was NINE MILLION ONE HUNDRED AND SEVENTY THREE THOUSAND ONE HUNDRED AND NINETY DOLLARS, and only one million two hundred thousand dollars worth of this was sent out. The product of all our flour and fishing trade together, would not pay for the silks brought in by more than ONE MILLION of dollars. Here then is a chance for Yankee enterprise—Yankee industry, and Yankee ingenuity, to exert itself without a fear of being run down by competition.

Within the present year there has been new looms, reels, &c. invented by Gay & Bottom, if we mistake not, of Lisbon, Conn. which will make a great change in the business, making it still more an object for our farmers to begin the business. There cannot be much doubt now that the Chinese Mulberry will stand the severity of our winters. It did so last winter, and if it will this with the thermometer over 30 below zero, we may certainly set it down as a hardy plant. At any rate, we know that the White Mulberry will, and that is the tree at present used for feeding the worm, though the other may possibly supersede it.

Salting Hay.—In a conversation with a farmer of West Chester county, he informed us that he makes it a practice to salt all his hay when he puts it into his barn. He finds numerous advantages from the practice. Stock eat it more freely, waste less, and thrive better. It can be secured in finer order, and it keeps longer; does not become so dry and dusty as unsalted hay. He also considers it a preventive of many diseases. One season, a considerable portion of his hay was obtained from low wet ground, where it grew coarse. The remainder was of a very superior quality—so much so, that he deemed salting unnecessary. The other coarse hay had a liberal quantity of salt put on every layer, as it was mowed away in the barn. In winter, he was surprised to find his horses and cattle give this coarse salted hay the preference.

Experiments with Potatoes have been carried on, with great care, in the Horticultural Society's garden, for some years past, and the results given in two papers by Dr. Lindley, the last of which is just published in part vi. of the Hort. Trans., vol. i. second series. From this paper it appears that the opinion entertained by Mr. Knight, and a number of other persons, of the superior production of whole tubers over sets, is unfounded. The same result, it is stated, has also been arrived at by Sir George Mackenzie, from experiments made by him in Rosshire. Other instances will be found in our First Additional Supplement to our Encyclopædia of Agriculture, just published. —[*Loudon's Magazine.*]

It appears from the annual statement in the Boston Gazette, that the transactions in the Brighton market last year amounted to over one million and a half of dollars.

Worldly Evils.—"There are but two bad things in the world," says Hannah Moore, "sin and bile."

THE BREEDER & MANAGER.

[From the London Lancet.]

LECTURES ON VETERINARY MEDICINE, *Delivered in the University of London by Mr. Youatt*—Lecture X.

THE MEDICAL TREATMENT OF GLANDERS—SUPPOSED CASES OF GLANDERS OFTEN FALLACIOUS—IMPORTANCE OF PURE AND COOL AIR—THE IMPOSSIBILITY OF USING LOCAL APPLICATIONS—COUNTER-IRRITANTS—TONICS.

The unsatisfactory nature of this inquiry.—I regret that I have nothing satisfactory to lay before you on the medical treatment of glanders.—There have been a thousand pretended specifics, and even regular and scientific practitioners have flattered themselves that they had discovered this chiefest among the veterinary desiderata, a cure for glanders. Some horses have apparently recovered, and that under every stage of the disease, except when the lungs were much turberculated, and 'vomicæ had appeared. They have recovered under every mode of treatment, and without any medical treatment. Hence it has happened that almost every drug has, in its turn, been considered a specific, and every one, from the wine and oil of Vegetius, to the sulphate of copper, and the cantharides of latest celebrity, have sunk into disregard and disuse. The only cure, the cheapest and the best, and that which you will in the majority of instances strenuously recommend, is the bullet, or the knacker's pole-axe.

Frequent deception with regard to the cure.—Then, Gentlemen, it would seem to be mere waste of time to say anything more on this point, nor would I, if I were not aware of the method by which the public have been again and again deluded, and practitioners have deluded themselves. It has occasionally happened that, after the administration of a certain drug, or when the animal has been left to the vis medicatrix naturæ, the discharge has gradually diminished—it has ceased; weeks and months have passed away, and it has not returned—the horse has been apparently cured. He has been dismissed from the infirmary, and the practitioner has taken to himself a great deal of credit.

Before I can add my mite of approbation, I must know a little more about this horse; I must be assured *that he was glandered*. I must have testimony as to the chancrous ulcer and the adherent gland; and I must, in such a case, go further, I must have the result of inoculation with the matter discharged. Even this will not satisfy me. I must know something of the horse afterwards, and long afterwards. I must follow him for months and for years. I must not only be assured that the glanderous ulcer does not reappear, but that there are none of the strangely-varying and deceptive forms of farcy—no gradual withering and decay—no establishment of pulmonary phthisis. The horse must not a twelvemonth afterwards vanish from my observation, and he must not be found dead in a ditch.

Well! I see the horse well, and at work, one, two, or three years afterwards. Am I satisfied? No, not even then. My belief in the hopelessness of all medical treatment in true and confirmed glanders, is even yet scarcely shaken. I must have a second or a third trial, and a successful issue of the second and third experiment. Even then I am so unconscionable as to cling to some portion of my scepticism. I must have the remedy tried in another and distant situation, and at another and distant period—in fact, under another atmospheric influence, so that it shall be impossible for me to suspect the working of that unknown and mysterious agent, opposed to which I am powerless; and aided by which I am, in a manner, omnipotent. How few of the boasted specifics for every disease have passed this ordeal! The specifics for glanders have not. Certain medicaments have apparently succeeded—in other, or in the same hands, they have afterwards failed. Gentlemen I am urgent in endeavouring to impress this on your minds, because I know that youth is sanguine, and many have deluded themselves, and compromised their reputation, and injured their employers.

The cure should however be attempted.—Do I then recommend you to abandon, or to refuse to treat, every case of glanders that may be submitted to you? No! no! I only ask you, in the first place, not to impose upon your employer, but unequivocally to state the apparent hopelessness of the case; and then, if the animal is valuable, and the owner wishes and urges you to attempt a cure, do so. Set at work about it in good earnest, and thankful that you have the opportunity to do so; and, further than this, when you have opportunity, without its being too burdensome upon you, seek out for cases, and experiment upon them at your own expense. The desire to relieve your profession from this blot upon its character is a laudable one; and you will be repaid by the consciousness of having been engaged in a good cause, although there should be no successful termination of your labours.

A pure atmosphere the first Remedial measure.—Can I guide you as to the course you should pursue? A consideration of the nature of the disease may afford you some useful hints. The seat of the disease is that vascular and sensitive membrane which lines the cavity of the nose; and the predisposing cause of the disease is, that frequent or habitual state of excitement, and consequent debility, to which this membrane has been absurdly and cruelly exposed. Glanders is the peculiar disease of the stabled horse. Then it is evident that the preparation for, or the foundation of, a cure, must consist in the perfect removal of every exciting cause of the disease. The horse must breathe a cool and pure atmosphere. He must be turned out, or placed in a situation almost equivalent to being turned out, or that of which there was only the probability of being accomplished even under the most favourable circumstances, becomes absolutely impossible. I have laboured to impress it upon you, that the affection of the nostril, in its earliest form and appearance, is *not the local symptom of a constitutional disease*. The disease is at first purely a local one, and it long continues so. It is only when the part is debilitated, disorganised by the continuance of inflammatory action, or the local inflammation runs its usual course, that the vitiated secretion is absorbed, and the constitution empoisoned. Our bad management produced this local inflammation, and that management must be radically reformed ere we can remove the inflammation or its consequences; therefore I say, that the breathing of a cool and pure atmosphere must constitute the foundation of our remedial practice.

The reputation of some Nostrums founded on the subsequent turning out.—The majority of those who pretend to cure glanders recommend that the horse should be turned out after he has taken a quantum sufficit of their medicine. In fact, if any good is accomplished, it is principally or entirely by the turning out.

The danger of Contagion in turning out.—A salt marsh is, above all others, the place for this experiment; but there is a great deal of caution required here. No sound horse must be in the same pasture, or in a neighboring one; the matter conveyed by the wind across a hedge may communicate, and has communicated, the disease. The palings or the gates may receive a portion of the matter, which may harden upon them, and, many a month afterwards, be the source of mischief; nay, I may, perhaps, be justified in saying, that the virus may cling about the very herbage and empoison it. I should hardly dare trust even cattle and sheep with a glandered horse, for the experiments are not sufficiently numerous or decided as to the exemption of these animals from the contagion of glanders; at all events I should fear the reception of the virus on an abraded surface. We must then, I fear, have a little field devoted to the glandered horse, and to him alone. I would not admit even other glandered horses, for they might he reinfected.

The impossibility of local applicatians.—We return to the nature of the disease—chronic local inflammation, terminating in constitutional affection. Can we get at this local inflammation, and, either by some emollient or sedative application, or by that which will produce a temporary greater irritation, but of a different character, successfully attack it? Why, in the first place, although we know it is an affection of the Schneiderian membrane, we do not know of what part of it, and therefore we must apply our injections haphazard. In the next place we can get at but a certain small portion of the membrane by any means that we can adopt. By trephining the nasal bones we only reach the upper meatus, and there chancres have rarely been found. By trephining the frontal or malar bones, we get at the frontal and maxillary sinuses, but the fluid or the discharge from them pours into the nostril a considerable way down the cavity, leaving the upper portion untouched; and one moment's inspection of the contents of the nasal cavity, and their relative situation, will convince us that it would be a vain attempt to get one drop of our injection into the upper part of the nostrils. Beside this, if we could get it there, we should but add fuel to fire, for glanders was caused by this membrane being exposed to unnatural irritation, and morbid irritation of any and of every kind has a necessary tendency to produce glanders; therefore, Gentlemen, no injection if you please, and least of all those acrimonious ones, which can only torture the animal and hasten the termination of the affair.

Counter Irritants.—Blisters, or setons, along the nasal bones, or the sutures between them and the superior maxillaries, or over the frontal sinu-

ses, if the horse should give indication of pain when pressed there, are far more surgical-like measures; and should rarely be omitted in our treatment of glanders. There we are properly resorting to the use of counter-irritants; but perchance the seat of this local inflammation may not be within the reach of these stimuli, however powerful.

Tonics, particularly the Sulphate of Copper. Glanders is a chronic inflammation of the membrane of the nose, debilitating it, and at length producing general debility. Tonics would appear to be indicated, to sustain the system against the insidious effects of this long-continued irritation; or to excite another, and healthier, and more powerful action, and before which the other must succumb; but then, can we find a tonic which, while it has effect on the constitution generally, exerts its chief power on some particular part, and that part the Schneiderian membrane? Most of our medicaments have this general and local effect. I believe that we have this general tonic, with a peculiar local determination, in the sulphate of copper. Its effect in healing nasal abrasions and arresting nasal gleet is undeniable. How should it be administered? Not in doses which alter its character and depress instead of supporting, destroy instead of rousing, the principle of vitality. You must not, by your incautious and rude assistance, knock the staggering man fairly down.—Sulphate of copper in small doses, a drachm, or two drachms, daily, or twice in the day, combined with some vegetable tonic that does not decompose it, and especially combined with an aromatic and stomachic—is worth trying.

Mr. Turner has some faith in the sulphate of iron; he gives it, however, not in nauseating, overwhelming, doses, but dissolved in the water, and the bucket, suspended in the box, so that the horse may drink a little at a time, and as often as he pleases. He says that the horse not only soon becomes habituated to the brackish taste of the iron, but prefers the drugged beverage to his common drink. Then, Gentlemen, every legitimate, but not cruel experiment, I would urge you to practise; for, doubtless, nature has provided a remedy for every disease, even for those which are the consequences of our own imprudence or mismanagement; but I trust I shall never hear that a pupil of mine has wantonly tortured a poor animal in so hopeless a case. I must never hear of your slitting the nostril, or scraping the cartilage, or firing the frontals of the nasal, or injecting pepper, or mustard, or corrosive sublimate, or sulphuric acid. There are brutes in human shape who have done so, and continue to do so. Our practice "must be founded on the union of science and humanity."

I will not detain you with a list of the medicines, and combinations of medicines, which have been used in the attempted cure of glanders. Every article of the human and veterinary pharmacopœia has been called into requsition, and, according to the opinion of some practitioner or other, successfully so. The bare enumeration of them would occupy almost a lecture. The few hints which have been suggested will be sufficient to guide you so far as a safe and practicable path can be traced over so intricate a region.

Caution against being too sanguine.—But with regard to all these curative measures, again I say be not too sanguine, not even although success should seem to crown your efforts, and that particularly in the most judicious and efficacious of all your means—long exposure to cool and pure air. I recollect sixteen or eighteen years ago having turned out several glandered horses; they were emaciated, ulcerated, and seemingly in the most hopeless condition. They had a six, or eight, or nine month's run, and they came up plump and apparently sound. I was half deceived, and willingly so. I had, however, the opportunity of tracing most of them; and of the majority of those whose after fate I could ascertain, this was the result. The predisposition to the disease remained—the membrane was in some degree irritable—possibly the very disease remained in an insidious state, and in less than six months the discharge again appeared, the glands enlarged and became once more adherent; chancres soon followed, glanders was again fully re-established, and that in a worse form than before: the malady speedily ran its course, and they died.

Tricks of Dealers.—I need not warn you of the tricks by which some dishonest dealers endeavour, and with the uninitiated too often successfully, to conceal the existence of glanders. Sometimes they are said to give a brushing gallop in order to clear the air-passages; then they inject a solution of alum, or sulphuric acid up the nostril, by the astringent power of which the discharge is for a while stayed. The animal is doubtless tortured, but I can hardly believe that the astringent effect would continue sufficiently long, or in fact could be established, from the improbability of being able to bring the liquid in contact with the diseased surface. When the discharge is from one nostril alone, some are said to introduce a piece of sponge too far up that nostril; there will still remain, however the indurated and adherent gland, or the lividness of chronic glanders, or the intense inflammation produced by the caustic that was injected. Either of these would excite suspicion, and if the examiner is at all on his guard, lead to certain detection.

Boiled flax seed.—This is the season of the year, when cattle, horses, and sheep, should occasionally have a little flax seed, boiled in water, and mixed with their food. If they are fed principally on dry food, the flax seed, as well as the liquid from it, is the more necessary.

Astonishing Fact.—It is a fact that has been proved by figures, that the amount of tonnage in 1832, in the New York Erie Canal alone, which passed Alexander's Lock, exceeds the whole amount of tonnage, both foreign and domestic, of the port of New York in 1833.—The tonnage of the port of New York for 1833, was 3,456 vessels cleared and arrived, of 771,846 tons, of which one third departed in ballast; whereas 800,000 tons, by computation, passed Alexander's Lock, without taking into consideration trade stopping above.

We remark that in 1833, there passed the lock at Utica 1,609,612 gallons of domestic spirits, and in 1834, the amount was 1,461,051, making a decrease in that article of 148,561 gallons in one year.

THE GARDENER.

[From Bridgeman's Gardener's Assistant.]

ON THE CHOICE OF FRUIT TREES IN THE NURSERY.

[Continued from page 303.]

PLUMS.

1. *Precoce de Tours, Early Tours.*—The tree is vigorous and fertile; fruit small, oval, dark purple, covered with fine bloom; flesh greenish yellow, tender, juicy, and of very agreeable flavour; one of the best early varieties, and very productive; ripe at the end of July.

2. *Great Damask Violet of Tours, Gros Damas de Tours.*—This plum is of dark purple colour, covered with bloom; the flesh is whitish, firm, sweet, pretty rich, and of a very pleasant flavour; it ripens towards the end of July, and is in perfection early in August.

3. *Morocco, Early Black Damask, Black Damascus, Black Morocco, Early Damask, Early Morocco.*—This is considered as one of the best of early plums. The tree is very hardy and productive; fruit middle sized, roundish; skin deep blackish purple, covered with a light blue bloom; flesh greenish yellow, juicy, rich and high flavoured; ripe early in August.

4. *Nectarine Plum, Caledonian, Howell's Large, Prune Peche.*—One of the most beautiful plums known; large, nearly round; the skin at maturity varies from red to crimson, covered azure bloom; flesh yellowish, coarse grained, astringent; juice abundant, and of mild, pleasant flavour; at maturity early in August.

5. *Jaune Hative, Prune de Catalogne, Prune de St. Barnabe, Catalonian, White Primordian, Amber Primordian.*—Fruit small, round, and of a yellow colour; ripens in the end of July; flesh mealy; tree a great bearer; and the fruit chiefly esteemed for its precocity.

6. *Blue Perdrigon, Perdrigon Violet.*—This plum may be ranked among the choice varieties; its form is nearly round, of medium size, and of purple colour; its flesh is greenish, partially melting, and moderately sweet and rich; it ripens at about the middle of August.

7. *Early Orleans, Hampton Court.*—Fruit of largish size and oval form; of a red colour; ripening about the middle of August; the flesh is of a rich juicy flavour, and the tree a great bearer.

8. *Wilmot's New Early Orleans, Wilmot's Orleans.*—This plum is of medium size and round form; its sature deep; of a dark purplish hue, covered with a fine bloom; the flesh is greenish yellow, of excellent flavour, sweet, combined with a pleasant acid. It is a handsome plum, ripening early in August.

9. *New-York Purple, Brevoort's Purple Bolmer.*—An excellent fruit, raised from a seed of the Washington Plum, that had been impregnated with the pollen of the Blue Gage. The fruit is very large, of a rich and brisk flavour; the flesh adheres to the stone; ripe about the middle of August.

10. *Blue Gage, Azure Hative.*—This fruit is of medium size, and of a roundish, oval shape; skin violet, powdered with a light blue bloom, with pale yellow dots; flesh greenish amber, rich, sugary and high flavoured; ripe in August.

11. *Chester, Matchless.*—This plum is of oval form, and of a dark blue colour, with a partial violet bloom; the flesh is dark yellow, rich, and full of sweet and pleasant juice; the fruit ripens in August, and the tree produces abundantly.

12. *Fotheringham, Sheer Plum.*—This fruit is of large size, the form oblong, with a deep sature; the skin is of a deep red colour; the flesh is white, firm and crisp, rich, juicy, and of fine flavour; at perfection in August.

13. *Royal de Tours.*—The tree is of extraordinary vigorous growth; its principal stem rises vertically; the fruit is globular, of red violet colour, covered with azure bloom, flesh yellow, fine, good; juice abundant and sweet; ripens in August.

14. *Maitre Claude.*—This fruit is of large size and round form; skin of a bright yellow colour, with dark red spots, and is covered with a thin white bloom; the flesh is pale yellow and firm, with sweet and sprightly juice; ripens in August.

15. *Washington, New Washington, Bolmer's Washington, Franklin, Imperial Gage, Superior Gage.*—A very large, globular plum inclining to oval; greenish yellow next the sun, with crimson specks, covered with a rich bloom. This plum has sometimes weighed over four ounces; its flesh is yellow and firm, sweet and delicious, but not considered equal in flavour to the Green Gage; ripe in August.

16. *Green Gage, Great Queen Claudia, Dauphine, Grosse Reine Claude, Abricot Vert, Vert Bonne, Large Green Claudia, Gros Damas Vert.*—A middle sized, round fruit, of a yellowish green colour, and purplish russetty red next the sun; the flesh is of a greenish hue, melting, with abundance of very sweet and highly perfumed juice, of an exquisite taste; it arrives at maturity towards the end of August.

17. *Lucombe's Nonsuch.*—This plum is large, compressed at the summit and base, its breadth two inches; its colour at maturity, as well as its form, resembles the Queen Gage, but more streaked with yellow; flesh firm, rich and juicy; at maturity by the end of August; tree a good bearer.

18. *Italian Damask, Damas d'Italie.*—This fruit is rather large, its form globular, a little flattened at the base; blue or violet next the sun, and covered with a purple bloom; its flesh is yellow, rich and juicy, and the tree, which matures its fruit by the end of August, is very productive.

19. *Bleecker's Gage.*—This plum is stated to have been raised by the Rev. Mr. Bleecker, of Albany, from the stone of a German Prune; it is described as a large, globular fruit, of excellent quality, and a great bearer.

20. *Cooper's Large Red, Cooper's Large American.*—This plum is of extraordinary size, measuring within an eighth of two inches in each direction; the skin is of a fine dark purple colour; the flesh is yellowish green, rich, juicy, and of pleasant flavour; the fruit makes excellent preserves, if gathered in August; its great defect is an inclination to rot.

21. *Kirk's Plum.*—This variety is said to be as hardy and prolific as the Orleans, as handsome as the Damask, and as good as the Green Gage.—Fruit large, roundish, oval; skin covered with a close, firm, azure bloom, through which appears a few golden specks; flesh greenish yellow, firm, juicy, and rich; in perfection the early part of September.

22. *Red Diaper, Diapree Rouge, Roche Carbon.*—One of the most beautiful plums known; form oval, two inches and one third in length, a little pear shaped; colour bright red, with a partial degree of bloom, and speckled with dots of deeper red; flesh greenish yellow, soft and sweet, but coarse; its quality does not correspond with its appearance, but they make excellent prunes, if gathered early in September.

23. *Goliath, Goliah, St. Cloud.*—This fruit is very large, sometimes weighing four ounces; the skin is a deep reddish purple, the flesh pale, firm and well flavoured, but not rich; the tree is a great bearer, and the fruit much used for cooking; ripe in September.

24. *Imperial Diadem.*—A large fruit, admirably adapted for culinary purposes; shape oval; colour pale red, but dark when mature, which is about the middle of September; it is of good flavour, and highly perfumed.

25. *Jerusalem.*—The tree is vigorous and productive; fruit beautiful; its form oval; skin thick, blue next the sun, covered with an elegant bloom; flesh yellowish, coarse grained, but melting; juice abundant, high flavoured and sweet; a large, handsome fruit, ripe early in September.

26. *Diamond Plum.*—Some consider this as the largest plum known; its colour is a dark purple; in form it resembles the Magnum Bonum, but its flavour is considered rather superior; the tree, which grows vigorously, originated with Mr. Hooker, in Kent, England.

27. *Red Queen Mother.*—This plum is large, its colour bright red, covered with pale bloom; its flesh is yellow, sweet and excellent, ripening in September.

28. *La Royale, Royale.*—A large and excellent plum, of a homely dull red colour, but concealed by a thick violet or azure bloom; flesh fine, yellowish green, firm, juicy, high flavoured and delicious; a superior plum, at maturity in September.

29. *Mimm's, Mimm's Plum.*—The fruit is very large, a little oblong; colour bright purple, covered with thick bloom; its flesh is yellowish green, tender, juicy, and very agreeable flavoured; ripe in September.

30. *Surpasse Monsieur.*—A large fruit, of oval form, and of a dark red purplish colour, raised by a Mr. Noisette; it is said to be more beautiful and perfumed than the Monsieur, and the tree yields suckers which produce fruit in all their beauty and excellence.

31. *Purple Gage, Reine Claude Violette, Die Violette, Konigen Claudie.*—This fruit is large, almost round, and considered in France as one of the finest varieties; its skin is of violet purple colour, with pale yellow dots, and covered with a light blue bloom; flesh greenish amber, rich, saccharine and high flavoured; at maturity in September.

32. *Virginale.*—This fruit ranks among the best of plums; its shape is round, colour yellowish, touched with violet or rose, and covered with dense bloom; flesh melting, juice abundant, and very agreeable.

33. *Red Magnum Bonum, Imperial Violette,* of the French.—A large, oval plum, of deep red colour, covered with blue bloom; flesh yellowish, harsh and acid; consequently good for cooking, preserves, &c. Fit for use in September.

34. *Red Perdrigon, Perdrigon Rouge.*—An excellent plum, of the first class, of medium size, oval shape, and fine red colour, with gold coloured dots and a fine bloom; flesh bright yellow, transparent; juice sweet and delicious. Peeled and dried in September, it makes excellent prunes.

35. *Winesour, Rotherham,* of the old gardens.—This plum is excellent for sweetmeats; it is of smallish size, oblong form, and of dark purple colour; the flesh is yellow, juicy, and of a pleasant acid flavour; the fruit is fit for use by the end of September; the tree is a great bearer, and will grow on any soil, but flourishes most on limestone or gravel.

36. *Apricot Plum, Prune Abricote, Abricottee de Tours.*—The fruit is large, its form globular, depressed, divided by a deep sature; whitish yellow, but faint red next the sun, and covered with bloom; its flesh is firm, juicy, sweet, musky and excellent; it ripens in September.

37. *Coe's Golden Drop, Coe's Imperial, Bury Seedling, New Golden Drop, Fair's Golden Drop.*—Raised by Mr. Coe, of Bury, Norfolk, Eng. The tree is vigorous, fruit of medium size; skin greenish yellow, spotted with violet and crimson; flesh gold colour, rich and excellent; the fruit ripens at the end of September, and will keep several weeks. A first rate fruit.

38. *Prince's Imperial Gage, Prince's White Gage.*—This tree was originated at the Flushing nursery, from a seed of the Green Gage. The fruit is one of the largest of its class; the skin at maturity is yellow, dotted with red; the flesh is rich, luscious, and of excellent flavour; and makes fine preserves, if gathered towards the end of August; at maturity in September.

39. *Saint Catharine.*—A medium sized, oblong fruit; skin bright gold colour, spotted with red at maturity, and covered with bloom; flesh yellow, tender, sweet, and of fine flavour; ripens in September.

40. *Late White Damson, White Damascene, White Winter Damson, Frost Plum.*—This variety is very productive, the fruit hanging in numerous clusters along the branches. The fruit is oval, of a greenish white colour, marked with brown spots; the flesh is juicy, and of pleasant flavour; it ripens in September, and continues on the tree several weeks.

41. *White Magnum Bonum, Imperiale Blanche Egg Plum, White Mogul, White Holland.*—This fruit is of extraordinary size, oval, yellow, covered with pale bloom; the flesh yellow, firm, acid and austere; excellent for cooking and preserves, in September.

42. *White Perdrigon, Perdrigon Blanc.*—A middle sized, oblong fruit, of a pale yellow, with red spots, and covered with white bloom; flesh yellow, rich, saccharine and juicy; it ripens in September.

43. *Imperatrice.*—One of the best of late plums; fruit medium size, oval; skin fine violet, covered with bloom; flesh yellowish next the sun, a little firm, and very sweet, rich and juicy at maturity, which is from October to December.

44. *Prune Suisse, Semiana, Prune d'Altesse, Monsieur Tardif.*—Fruit very handsome, round, flattened; colour varying from bright violet red, to

deep blackish blue, and covered with azure bloom; flesh greenish yellow, crackling and melting; juice very abundant and delicious; an excellent fruit, ripening in September and October.

45. *Downton Imperatrice.*—A superior late plum, of medium size; skin dark yellow, and very thin; the flesh yellow, soft, juicy, with a high flavoured acidity; at perfection in October.

46. *Late Black Damson, Damas Noir, Damas Noir Tardif.*—An excellent fruit, of dark purple colour, almost black, and covered with bloom; the flesh is rather firm, yellowish green, sweet, and slightly perfumed when at maturity.

47. *Late Purple Damson, Purple Winter Damson, Blue Damascene, Blue Damson.*—This variety is in great esteem for preserves, and generally commands a high price. It is of a dark purple colour, covered with bloom; the flesh has rather too much acidity for a table fruit, but this tartness gives it an agreeable flavour when cooked.

48. *Shropshire Damson, Damson Plum.*—This is a large variety of the damson, of fine quality and rich flavour, most excellent for preserves. It ripens in October and November, and the tree produces abundantly.

49. *Huling's Superb, Keyser's Plum.*—This plum is of monstrous size, and has been known to weigh nearly four ounces; it is of roundish form, and a greenish yellow colour; the flesh is sweet, rich and excellent. It was raised from seed by Mr. Keyser, of Pennsylvania, and brought into notice by Dr. Wm. Hulings, of that State.

50. *Late Chalons, Tardif de Chalons.*—This fruit is nearly oval, of a whitish yellow hue, tinged with red, and covered with bloom, the flesh is yellowish, melting and very juicy; ripe in October.

Singular Plant.—One of the most curious plants with which we are acquainted, grows in abundance along the top of Pohatcong Mountain, about a mile and a half in a southwest direction from the village of Mansfield. It is commonly called Frost Plant, or Rock Rose, but we have forgotten its botanical name, as also the class and order to which it belongs. We have never seen it in summer, but at this season of the year its appearance is that of a small weed about a foot in height and somewhat resembling the Wild Indigo, both in the form of its branches and of the dead leaves which remain upon it. During the frosty nights of Autumn two leaves of ice spring from opposite sides of the stem near the surface of the ground, which are generally melted off during the day and again renewed at night.

These ice leaves are of the lanceolar form three or four inches long, one half or three quarter, of an inch broad, and half a line in thickness. Perhaps the best idea of these singular formations, may be obtained by imagining the appearance of two petals of the White Lily fastened by their extremities on opposite sides of a slender stem, as they are about the same shape, and size and curved in the same graceful manner. They are formed of white transparent ice, striated lengthwise and much resemble in appearance the little ice columns which, during frosty weather, are frequently observed in ploughed fields where the soil is wet and gravelly. It is many years since we came across this curious plant while hunting on the mountain, and have never since had an opportunity of examining it, nor have we ever been able to meet with a single person who had observed it.—*Belvidere (N. J.) Apollo.*

MISCELLANEOUS.

Grooms and Tutors.—The carelessness of people in general as to the qualifications of the instructors of their children is marvellous, and only to be matched by the deficiency of respect to the same persons. The horse is not sent to the farrier's, or the colt to the break, with such little inquiry as to skill as commonly precedes the placing of a child at school. It is enough that some one else of the same class, or a class above, has a son or daughter there—the furniture of the principal's mind, or the aptitude for the business of instruction, is never thought of. It suffices to look for the proof in the fact, whether after a certain lapse of valuable time, the child is as forward as others, or a dunce. Even in private and wealthy families, we may say that few gentlemen take their grooms as they take their children's tutors—more testimonials and practical evidences of skill are required of the groom, and we must admit with shame that a good groom is often more valued, and treated as of more importance in his place than a good tutor, though tutors come to be bishops now and then, which grooms do not; indeed, a man who has a good groom values his offices too much to raise him above the stable to any superior appointment.

Wonders of Printing and of Steam.—The Boston Courier copies from a London paper an interesting description of the extensive printing establishment of Mr. Clawes, where the publications of the celebrated publisher, Charles Knight, and of the Society for the Diffusion of Useful Knowledge are printed. There are employed 30 type founders, 6 stereotype founders, 7 men damping paper, and 160 compositors. The principal composing room where the type is set, is 270 feet long, and is filled from end to end with a double row of frames. Two steam engines are employed in driving the printing machines, of which there are eight that can throw off from 700 to 1000 impressions per hour. There are 15 common printing presses for fine work, and 5 hydraulic presses, of 260 horse power each, for pressing paper. There are in the establishment about 1000 works in stereotype, of which 75 are Bibles. The first cost of these plates would amount to £400,000; the weight is about 3,000 tons, and if melted and sold for old metal, would be worth £70,000. The average quantity of paper printed amounts weekly to the astonishing quantity of about 2,000 reams. When the paper makers and other tradesmen are taken into account, the men to which this establishment gives employment must amount to several thousands.

The sugar crops at Attakapas, Louisiana, is this year, we learn from the Franklin Republican, unusually abundant, and of excellent quality.—The canes have ripened this year so as to produce the tassel, and some of them are 20 feet in height.

Strong Potatoes.—It was noticed by a gentleman who frequently dined with an old maiden lady, that among the usual accompaniments to her animal food, he never saw any potatoes. At length he ventured to enquire respecting their absence. "Why, to tell you the truth," replied the lady, in a mysterious under-tone, "I have banished that vegetable from my house long since. When my servants ate potatoes, they did nothing but quarrel; they are now the most peaceful domestics in the world, because I have forbade the use of potatoes!" On the gentleman expressing his admiration, the lady continued: "Why what is the cause of all the rebellion in Ireland? Potatoes. What makes the Irish such a passionate, head-strong people? The immoderate use of potatoes. And if Government is desirous of tranquilizing that unhappy country, they must set up a temperance society, and entirely forbid the use of potatoes."

Wooden Rustic Work for Gardens.—The advantage of wooden rustic work is that it can be adapted to a great variety of purposes. Thus very beautiful and even architectural temples may be formed of unbarked wook. Ornamental doors, every description of garden seats, and flower baskets and vases of very elegant forms, may be composed of the same material. Shady walks also, having the pleasing gloom and enriched effect of a Gothic cloister, may be made of wooden rustic work. I allude more particularly to what I call wood mosaic, which is, I believe, rather a modern invention. It is formed of split sticks of various lengths and sizes, and having bark of different colors. The pieces are nailed to any flat surface of wood, and very beautiful and elaborate patterns may be produced by arranging the pieces according to their sizes and the various colors of the work. Garden seats and vases of almost any shape may be covered with this kind of mosaic work, but as it is not durable when exposed to the weather, it is most suitable for the inside of summer houses and garden temples. In such situations the richest specimens might be introduced, and if varnished over they would last for a number of years.—*Gard. Mag.*

Method of building Chimneys that will not Smoke.—Contract the space immediately over the fire, so you may be sure of the air being well heated *there;* this will ensure a current upwards. All chimneys should be carefully built, and every joint well filled with mortar, so as to prevent communication in case of fire.—*Dr. Thomas Cooper.*

A large tree—Travellers in Mexico give an account of a famous cypress tree, in Atlixco, in Mexico, said to be the largest in the world, with the exception of the Boabab in Senegal. It measures *seventy-six feet* in circumference.

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BALTIMORE PRODUCE MARKET.

☞ *These Prices are carefully corrected every* MONDAY.

	PER.	FROM	TO
BEANS, white field,	bushel.	2 00	2 50
CATTLE, on the hoof,	100lbs.	5 00	5 75
Slaughtered,	"	3 00	4 00
CORN, yellow,	bushel.	——	——
White,	"	——	65
COTTON, Virginia,	pound.	12	15
North Carolina,	"	14	16
Upland,	"	16	18½
FEATHERS,	pound.	35	37
FLAXSEED,	bushel.	1 62	1 75
FLOUR—Best white wheat family,	barrel.	6 00	6 50
Do. do. baker's	"	5 50	6 00
Do. do. Superfine,	"	4 75	5 00
Super Howard street,	"	4 62	4 75
" " wagon price,	"	4 50	——
City Mills, extra,	"	4 87	5 00
Do.	"	4 70	——
Susquehanna,	"	——	——
Rye,	"	——	——
GRASS SEEDS, red Clover,	bushel.	5 50	6 00
Timothy (herds of the north)	"	2 50	3 50
Orchard,	"	3 00	——
Tall meadow Oat,	"	2 00	2 50
Herds, or red top,	"	1 25	——
HAY, in bulk,	ton.	16 00	——
HEMP, country, dew rotted,	pound.	6	7
" water rotted,	"	7	8
HOGS, on the hoof,	100lb.	5 00	——
Slaughtered,	"	5 50	——
HOPS—first sort,	pound.	15	——
second,	"	13	——
refuse,	"	11	——
LIME,	bushel.	30	33
MUSTARD SEED, Domestic,	"	5 00	6 00
OATS,	"	——	——
PEAS, red eye,	bushel.	——	——
Black eye,	"	87	1 00
Lady,	"	100	——
PLASTER PARIS, in the stone,	ton.	3 00	——
Ground,	barrel.	1 37	——
PALMA CHRISTA BEAN,	bushel.	1 50	1 56
RAGS,	pound.	3	4
RYE,	bushel.	——	——
TOBACCO, crop, common,	100 lbs	4 25	5 00
" brown and red,	"	5 00	7 00
" fine red,	"	7 00	9 00
" wrappery, suitable for segars,	"	6 00	12 00
" yellow and red,	"	8 00	12 00
" yellow,	"	9 00	12 00
" fine yellow,	"	12 00	16 00
Seconds, as in quality,	"	4 00	5 00
" ground leaf,	"	5 00	9 00
Virginia,	"	5 00	10 00
Rappahannock,	"	——	——
Kentucky,	"	6 00	9 00
WHEAT, white,	bushel.	1 05	——
Red,	"	95	——
WHISKEY, 1st pf. in bbls.	gallon.	28½	29½
" in hhds.	"	28	——
" wagon price,	"	24½	25
WAGON FREIGHTS, to Pittsburgh,	100 lbs	——	1 50
To Wheeling,	"	——	1 75
		washed.	*unwash*
WOOL, Prime & Saxon Fleeces,	pound.	50 *to* 60	24 *to* 26
Full Merino,	"	44 50	22 24
Three fourths Merino,	"	37 44	22 24
One half do	"	33 37	22 24
Common & one fourth Meri.	"	30 33	20 22
Pulled,	"	31 33	22 24

A FINE BULL.

FOR SALE, a young Bull, ten months old, sired by the thorough bred bull Apollo, (of the Gloster Stock) and out of a very fine cow of seven-eighths Durham S. H. blood, consequently fifteen-six teenths Durham S. H., is for sale a bargain if immediate application be made; he is truly a splendid calf, and will be sold for $100 cash.

Apply to I. I. HITCHCOCK,
jan 13 American Farmer Establishment.

BALTIMORE PROVISION MARKET.

	PER.	FROM.	TO.
APPLES,	barrel.	$3 00	$5 00
BACON, hams, new,	pound.	11	——
Shoulders,	"	8	9
Middlings,	"	——	——
BUTTER, printed, in lbs. & half lbs.	"	25	37
Roll,	"	15	25
CIDER,	barrel.	——	——
CALVES, three to six weeks old	each.	3 00	6 00
COWS, new milch,	"	17 00	30 00
Dry,	"	6 00	10 00
CORN MEAL, for family use,	100lbs.	1 50	——
CHOP RYE,	"	1 50	——
EGGS,	dozen.	19	20
FISH, Shad, salted,	barrel.	5 75	6 00
Herrings, salted, No. 1,	"	4 75	——
Mackerel, No. 1, 2 & 3,	"	5 12	7 00
Cod, salted,	cwt.	2 50	3 00
LAMBS, alive,	each.	1 25	2 00
Slaughtered,	quarter	31	50
LARD,	pound.	8	9
ONIONS,	bushel.	62	75
POULTRY, Fowls,	dozen.	1 50	2 25
Ducks,	"	——	2 50
POTATOES, Irish,	bushel.	40	62
Sweet,	"	——	——
TURNIPS,	"	37	50
VEAL, fore quarters,	pound.	3½	4
Hind do.	"	6¼	——

ADVERTISEMENTS

CHOICE AGRICULTURAL SEEDS, &c.

NEW Italian Rye Grass, and Pacey's perennial do. both suitable for the south; Sainfoin, finest Provence Luzerne, Dutch White Clover, Trefoil or Yellow Clover, New Crimson Clover, or Trifolium incarnatum; Orchard Grass, or Cocksfoot; Tall Oats Grass; Skinless Oats, Early Angus, Hopetown, and English Potatoe Oats, weighing 44 lbs. per bushel; superior Barley, large field Burnet, Timothy or Herds Grass, Vetches, Lentiles, Taylor's forty-fold Potatoe, now taking precedence of all others; early Nonpareil, Mercer, Kidney, and Pinkeye Potatoes, Potatoe Onion, white Italian Mulberry, large Riga Flax, Dyer's Madder, Woad and Weld; extra large Fuller's Teazel, large white field Carrot, the sweetest and most profitable for Cattle; red, yellow and white Mangold Wurzel, the two latter exceedingly sweet, and all very profitable for cattle, Turnips of every kind suitable for eattle and garden. All the foregoing seeds, and every other kind for the farmer, or for the kitchen and flower garden, will be supplied at moderate prices, comprising many superior new Vegetables never before offered to the public.

Among these are a number of very superior Cabbages, Lattuces, Peas, Beans, Onions, Radishes, Beets, Cucumbers, Squashes, Pumpkins, Spinach, Turnips, &c. introduced from the south of France, Spain and Italy, and particularly suited to a southern climate.—The following choice new Melons can now be supplied—Malta winter, with green flesh, rich and high flavored, and keeps till February; Netted Romana, Oval Romana, French Muscade, Cohansa, Imperial, Ispahan, Cyprian, Early Cantaloup, Green fleshed Sugar, Fine Japan Cantaloup, Dark Orange, and Embroidered Cantaloup, Scarlet Rock, Small Prescot, White Rock, Green Pine apple, Netted Cantaloup, and some others, comprising a luxurious addition to the dessert.—All applicants will have the Seed Catalogue, and other Catalogues sent them *gratis*, and orders sent direct per mail for Seeds, Fruit and Ornamental Trees, Flowering Plants, Green House Plants, Bulbous Roots, double Dahlias, &c. will have prompt attention, and the packages forwarded precisely as designated—Chinese Mulberry, or Morus multicaulis trees at reduced rates, and cuttings in proportion. Grape Vines, and cuttings of all kinds at moderate prices in any quantity.

N. B. The Grass Seeds, &c. in quantities will be supplied much below the usual rates.

WM. PRINCE & SONS.
Linnæan Garden and Nurseries, near New-York.
jan 20 2t

GAMA GRASS SEED

JUST received, and for sale at this Establishment—Price 50 cents per ounce.

GRAPE VINES.

HERBEMONT'S Madeira, one, two, and three years old, from 25 cents to 75 each.
Isabella, two and three years old, at 25 to 50 cts each.
Catawba, one year old, 25 cts. each.
White Scuppernong, two years old, at 37½ cents each.
Sultana, one year old, at 50 cts. each.
Woodson, two years old, at 37 cents each.
Red Bland, one year old, at 25 cts. each.
Are for sale at this establishment, and will be well packed to go any distance. no. 25

BULBOUS ROOTS.

HYACINTHS, Tulips and a general assortment of Bulbous Roots, suitable for the present season, for sale low at this establishment by
Oct. 28. I. I. HITCHCOCK.

MORUS MULTICAULIS.

THE subscriber has on hand a few hundred of this celebrated Tree, unrivalled in the quality of its leaves as food for the silk worm, for which he is ready to receive orders (accompanied by the cash) with *particular* directions for the delivery of the trees on or after the first of Nov. next. Price 50 cents each, $5 per dozen, or $40 per hundred.

The success and ease with which this tree is propagated, the extraordinary quickness of its growth, the superiority of its leaves over *all* others for the silk culture, and its uncommon luxuriance and beauty, altogether recommend it to the favourable notice of *every farmer* as a most valuable acquisition. I. I. HITCHCOCK,
aug. 26 Amer. Far. Estab.

AMERICAN FARMER ESTABLISHMENT,

No. 16 S. Calvert street, Baltimore, Md.

COMPRISING a Stock and Experimental Farm; a Nursery and Seed and Flower Garden; a Store for the sale of Field and Garden Seeds and Agricultural Implements and Books; a general Agricultural and Horticultural Agency; the Publication Office of the "Farmer & Gardener, and Live Stock Breeder & Manager," and of "Hints to Farmers;" and an Office of APPLICATION for Farmers, Gardeners, Overseers, Managers, &c.

I. IRVINE HITCHCOCK, *Proprietor.*

This establishment is now in full and successful operation, nearly every department, especially that of seeds, being well supplied with articles of the most desirable quality.

Orders by wholesale or retail will be promptly executed on terms that cannot fail to give entire satisfaction to purchasers.

As the limits of an ordinary advertisement preclude the possibility of conveying an adequate idea of the variety and the value to the cultivator and dealer in seeds, of the contents of this establishment, a comprehensive and descriptive PROSPECTUS AND CATALOGUE has been printed and will be sent gratis to any gentleman who will transmit to the proprietor his address (post paid) for that purpose.

TERMS OF THIS PAPER.

1. Price five dollars per annum, payable in advance. ☞When this is done, 50 cents worth of any kind of seeds on hand will be delivered or sent to the order of the subscriber with his receipt.

2. The *manner* of payment which is preferable to any other for distant subscribers, is by check or draft on some responsible party here, or else by remittance of a current bank note; and to obviate all objection to mail transmission, *the conductor assumes the risk.*

3. Subscriptions are always charged BY THE YEAR, and never for a shorter term. When once sent to a subscriber the paper will not be discontinued (except at the discretion of the publisher) without a special order, on receipt of which, a discontinuance will be entered, to take effect AT THE END of the current year of subscription.

4. Subscribers may receive the work either by mail in weekly numbers, or in monthly or quarterly portions; or else in a volume (ending in May annually), handsomely pressed, half bound and lettered (to match with the American Farmer) by such conveyance as they may direct: but the $5 must in all these cases be paid in advance.

☞ADVERTISEMENTS relating to any of the subjects of this paper will be inserted once at one dollar per square, or at that rate for more than a square, and at half that rate for each repetition.

THE FARMER & GARDENER;

AND LIVE-STOCK BREEDER & MANAGER.

CONDUCTED BY I. IRVINE HITCHCOCK, AND ISSUED EVERY TUESDAY FROM THE AMERICAN FARMER ESTABLISHMENT, AT $5 PER ANNUM, IN ADVANCE

No. 40. **BALTIMORE, FEBRUARY 3, 1835.** **Vol. I**

☞This publication is the *successor* of the late

AMERICAN FARMER,

(which is discontinued,) and is published at the same office, at five dollars per year, payable in advance.

☞When this is done, 50 cents worth of any kind of seeds on hand will be delivered or sent to the order of the subscriber with his receipt.

American Farmer Establishment.

BALTIMORE: TUESDAY, FEBRUARY 3, 1835.

IMPORTANT DISCOVERY—PERHAPS.

To the Editor of the Farmer and Gardener.

I have been a constant reader of the American Farmer from the time of its first publication, and frequently referred to it, in hopes of finding an effectual remedy against the attack of the worm on peach trees. I found at different times a number of publications upon the subject, and believe have tried the greater part of the remedies therein prescribed, without success. Finally, I concluded that the old method of cutting the worm out with a penknife, was the only one upon which any reliance could be placed, and have therefore been in the constant habit of preserving my trees in that way for years. I have, however, lately made an experiment, which I have every reason to believe, is quite as effectual, and attended with much less trouble. About a year ago, after I had gone the rounds, laid bare the roots, and cleared my trees of the worm, I took some fine screenings of Anthracite coal, and put about a quart or two to the roots of each tree; this was done to about the one half of my peach trees. Last fall I went round as usual to cut out the worms; those trees which had the Anthracite coal screenings about their roots, were, without a single exception, clear of worms, the others had, as usual, a considerable number. I immediately applied the coal to the whole of my trees, and thus far, am well pleased with my prospects of success. I propose continuing the experiment another year, after which, I can speak with more certainty upon the subject; but the circumstance of that half of the trees upon which the experiment was made, although situated precisely like the others, having been found clear of worms, when the others were full of them, is strong evidence in my mind that the remedy will prove effectual. N.

Orwigsburg, 25th Jan. 1835.

BENE SEED.

CHARLESTON, S. CAROLINA, Jan. 4, 1835.

To the Editor of the Farmer and Gardener:—

I send you by this opportunity a box of Bene or Sesamum seed, which is very much used in this country, for all complaints of the bowels; it is particularly efficacious in *dysentery*. The seed is sown in April, and the leaves are fit for use in June. They are steeped in spring water, two or three to a tumbler, and in 10 or 15 minutes the water will be fit to drink. Children drink it freely, as it is free from any thing unpleasant to the taste or smell.

—

The following description from the New England Farmer gives a good idea of this important plant:

THE BENE PLANT.

Mr. Fessenden—Dear Sir, in October, 1810, being on an excursion to Savannah, I was favored with an opportunity of making myself acquainted with the properties of the Bene plant. I visited a gentleman's plantation in the country where it was cultivated extensively and was then in full harvest. It was planted in hills like beans, and the produce of seed was exceedingly abundant, and it was ascertained that with proper management one hundred pounds of seeds would yield ninety pounds of oil. A bottle of the expressed oil was presented to me, which I found in domestic use to be fully equal to the best Florence oil. On my return I planted some of the seed in a garden of a rich and moist soil; the plant flourished luxuriantly and attained to its full size, and in autumn the pods were well filled with seed, but before they were quite ripe an early frost destroyed my pleasant prospects. There is in my opinion a tolerable probability that this plant may be cultivated in our climate if planted in a light, not too rich, soil; and if success should attend the trials it would prove an article of incalculable importance to our agricultural interests. In the 4th edition of my American New Dispensatory, I published the following account of the Bene plant.

Sesamum Orientale. Oily Grain. Bene.

This, originally an African plant, has become well known by the name of *bene* in South Carolina and in Georgia, or the vangloe of the West Indies. It is an annual plant, rising with an herbaceous four cornered stalk, two feet high, sending out a few short side branches; the leaves are oblong. oval, a little hairy, and stand opposite. The flowers terminate the stock in loose spikes; they are small, of a dirty white color, shaped somewhat like those of foxglove. After the flowers are past, germen turns to an oval acute pointed capsula, with four cells filled with oval compressed seeds which ripen in autumn. Of late years, the seeds have been introduced into the states of Georgia and South Carolina, by the African negroes, where the plant succeeds extremely well, and they boil a handful of the seeds with their allowance of Indian corn, which forms a nourishing food. But the excellency of these seeds consists in their yielding a larger proportion of oil than any other vegetable with which we are acquainted. One hundred weight of seed will produce ninety pounds of oil of an equal and even preferable quality to Florence oil. It will keep good many years without contracting any rancid smell or taste, and when the warm taste of the seed discovered in the oil when first drawn, is worn off, it becomes quite mild, and is found to be a pleasant and agreeable substitute for all the purposes of salad oil. It also burns well in lamps. The leaves of this plant, by infusion or decoction are found to afford an excellent mucilage, well adapted to all the intentions of that class of remedies, and in 1803 was used with the most marked good effect, in an epidemic dysentery in South Carolina. Considering therefore, the great utility and importance of the bene plant, its cultivation by our patriotic planters cannot be too strongly recommended.

The foregoing is the account which I penned about fourteen years since, and I commit it to your consideration, and subscribe with respect,

Your obedt. servt. JAMES THACHER.

Plymouth, Jan. 15, 1835.

Horses and Cattle.—An intelligent farmer of this town has communicated to us, what he says, is an effectual remedy against injury to horses and cattle, who may have eaten too much grain: It is simply to administer a pint of melted hog's lard as soon as the fact is discovered. He says he has tried the experiment a number of times, and always with success.—*Norridgewock Journal.*

The manufacture of sugar from the beet root increases in the north of France. There are now 45 manufactories.

Mrs. Bogue, of Amherst, on the 29th of September last, the anniversary of her *ninety-ninth year*, spun sixty knots and thirty threads of handsome wollen yarn.

THE EYE.—The use of shades and bandages on every trifling affection of the eye, is an evil that cannot be too strongly reprobated; for the action of light and air being thus excluded, and the organ rigidly compressed, opthalmia, and even total blindness, is not unfrequently the consequence of that which, being perhaps merely a slight flow of humor, or a little extravascated blood, would have subsided in a few days, if judiciously treated, or even if left to itself.—*Curtis on the Eye.*

THE FARMER.

[From the Journal of the Franklin Institute.]

REPORT *on Mr. J. D. Woodside's Revolving Harrow and Seed Cart.*

The Committee on Science and the Arts, constituted by the Franklin Institute, of the State of Pennsylvania, for the promotion of the Mechanic Arts, to whom was referred for examination a Revolving Harrow and Seed Cart, invented by Mr. James D. Woodside, of Washington City, District of Columbia, Report—

That having examined a model of the machine, and inspected numerous certificates of its performance, which have been given by agricultural gentlemen, they are of the opinion that this is a valuable improvement in that necessary implement of husbandry, the harrow.

Some of the committee were present during a trial of one of these machines, the result of which was highly satisfactory. It seemed on that occasion to require more power to move it than the common harrow, but its superior efficacy in eradicating weeds, and pulverising the soil, will, it is believed, more than compensate for this difference, as it will certainly do more work at one operation, than the common harrow will at two or three.

Another advantage which it possesses is, that it is not so liable to be clogged or choked by weeds and clods of earth, as the common harrow. These are collected by the latter, and wherever the harrow is raised to clear it of them, there remains a heap of rubbish, which impairs the evenness of the field, and injures the crop.

The committee have not had an opportunity of seeing the seeding apparatus in operation, but from an inspection of it, they believe it will be found to answer very well for smooth and heavy seeds, such as clover seed, and wheat or rye, as it will, if properly regulated, distribute them more evenly than can be done by hand.

Accompanying this report, is a description of the machine, which has been furnished by the inventor.

By order of the Committee,

WILLIAM HAMILTON, *Actuary.*

Oct. 9th, 1834.

Description of Mr. J. D. Woodside's Revolving Harrow and Seed Cart.

In the construction of my harrow I use a cylinder of about six inches in diameter, made of any solid wood, equal in length to the distance of from face to face of the hubs of the wheels of a cart, to which it is attached. The cylinder moves on gudgeons, passing through the arms of a frame, the four ends of which rest on the end of the iron axle projecting beyond the hubs. This frame is forced back from the cart wheel by a nut on a bolt, which enters the end of the arms of the frame, for the purpose of tightening the chain band, which passes over the band wheel, secured to the spokes on the inner side of the cart wheel, having a V groove to receive the chain. Near each end of the cylinder is a cast iron cylinder, with a V groove of about eight inches diameter, in which the chain plays with a cross, which gives the cylinder a counter motion to that of the cart wheel. The circumference of the band wheel on the spokes of the cart wheel being about 128 inches, and that of the cylinder wheel 24, gives six revolutions of the cylinder to one of the cart wheel; consequantly, the teeth on the cylinder (39 in number) move with a rapidity which roots up all kind of weeds, such as crab grass, wire grass, vines, &c. and at the same time, pulverises the earth most effectually, to the depth of six inches or more, the length of the teeth. By placing the chain band over the wheels, without the cross, the cylinder will of course revolve with the cart wheel; and as it makes six revolutions to one of the cart wheel, the cylinder weighing 250 lbs. acting as a roller, tends to mash the clods of earth, which the teeth in revolving cut and lighten up, in a very effectual manner. In working the implement without the cross in the band, it does not require much power, but it is evidently not so effectual in destroying weeds, &c. There is a contrivance for elevating the harrow or cylinder, for passing over stumps, &c. by means of a windlass. The grain is distributed from the cart by a sieve of sheet iron, in the form of two spouts, having a descent each way, from the centre of the cart in front, and passing under the shafts, extending as far out as the cart wheels. To these spouts or sieves, which are perforated to suit the size of the grain to be sown, is connected a mouth-piece of leather, in the upper end of which is a square frame of iron with a bolt thus, ⊓ which bolt enters the front board of the cart, and suspends the sieve. A hopper, ⊔ with a leather mouth-piece, placed inside of the cart, conveys the grain to the sieve, which is always full while the grain is to be seen in the hopper. The grain is shaken through the sieves by means of a cog wheel, which strikes the ends, and are revolved by a band which passes over the hubs of the cart wheel, and the two cog wheels on each side of the cart. The faster the cart moves the faster the grain falls; and the quantity to be sown to the acre, is regulated by the number of holes in the sieves.

The harrow and seeding apparatus can be attached to, and detached from the cart, in five or ten minutes, so that the cart is always at service for other purposes.

Gentlemen of the Committee—This explanation of my harrow, &c. I hope will prove satisfactory, and enable you to make your report. As the two gentlemen who were present on the 26th instant, when the harrow was in operation, were of opinion that the implement required much power, I must beg leave to remark that I was harrowing ground six inches deep, which had only been ploughed to the depth of four inches, and in addition to which, the shaft horse received but little aid from the leader. I am willing to admit that my mode of harrowing requires more power than the common harrow, and I think my harrow is richly deserving of more power, as it does the work far, very far, superior to the implement heretofore used for that purpose. As regards the common harrow, I consider it a very rough, inefficient affair, which merely scratches two or three inches of the surface of the earth, covering the clods, but not breaking them; this has been fully proved, by passing my harrow over after it. I am fully persuaded that with three horses and one hand, I can do more work than six of the old-fashioned harrows, and in better style.

I make these remarks, not by way of boasting, but from a conviction that the common harrow cannot, from the nature of its movement, compete with mine.

Very respectfully,
Your ob't serv't,
JAMES D. WOODSIDE.

Philadelphia, Sept. 27, 1834.

[From the Maine Farmer.]

USE OF LIME IN AGRICULTURE.

The calculation made in this number of the Farmer respecting the use and cost of Lime as a manure, should receive a careful perusal. It will be seen that the expense of liming land is not so great as many suppose—especially when we take into consideration its durability. There is scarcely any soil on which lime may not be put with advantage, except where it is already contained abundantly in it.

Without at present entering into a discussion of the why, the when and the therefore, in regard to the application of lime, we will now give the substance of a letter published in the Farmer's Register (in Virginia,) respecting the use of lime in Pennsylvania. It is well known that the use of this article in that State has been of immense service to their farmers, and not only in that State but in others also, where it has been freely used.

The writer states among other things that he purchased thirty acres of land, for which he gave $14 per acre. Twenty of these acres had been cleared for some time and had been used as a common for some years, indeed it was not thought worth purchasing 150 rails to enclose it, which number with what fence there was on it, made a good and sufficient fence for it. He then had five acres ploughed and planted to corn. It being a mile and a half from his farm no manure was carted upon it. It did not yield him *five* bushels of good corn to the acre. He then sowed the same five acres to oats and clover seed, but it did not pay him half the labor bestowed upon it. Not liking this state of things he set about renovating the land in order to make it more profitable. He accordingly put ONE THOUSAND bushels of lime upon his twenty acres, or fifty bushels to the acre—suffering it to lie upon the surface for four years. He ought to have ploughed it in, but he did not. There it lay for years, and he occasionally turned in sheep and calves. The fifth year he put on ONE THOUSAND bushels more, also upon the surface without ploughing. He had now you perceive put on one hundred bushels per acre. In the seventh year—a farmer who lived near wanted to take it on shares. It was accordingly put out to him, he giving one half of the crop for the use of it. It yielded THIRTY THREE bushels of good corn to the acre. Next year it was laid down with oats, clover and timothy or herd grass. It produced FORTY bushels of oats. It was then pastured four or five summers, and at the end of that time a THOUSAND bushels more of lime were put upon the twenty acres, which will make 150 bushels to the acre. He then cultivated it himself and obtained FORTY FIVE bushels of corn per acre. He again laid it down to oats and clover, and at the end of four years more he put on one thousand

bushels more. This made two hundred bushels of lime that each acre had received within about 14 years, and all the crops had been carried from it and nothing put on but the lime and about two tons of plaster and what the cattle dropped when pastured there. The cost of the improvement he estimates as follows, by which you will see that his lime and plaster was not cheaper there than here.

First cost per acre	14,00
200 bush. lime per acre at 16 1-2 cts.	33,00
2 tons of plaster, $10,	20,00
	$67,00

This land he asserts has yielded him 6 per cent. interest on the whole cost per acre. So you see that it is money well invested, besides the pleasure and satisfaction of raising a field which at best could yield but 5 bushels of corn per acre, to the producing 55 bushels. If he who raises two blades of grass where but one grew before, is justly considered a public benefactor, how much more entitled to that high honor is he who makes forty grow instead of one?

[From the Vergennes Gazette.]

POTATOES.

The following is the result of some experiments I made during the present season in growing *Potatoes.*

Presuming the produce would be such as to partake too much of the marvellous for general belief, and some small risks having been taken on the result, to place it beyond the reach of doubt or contradiction, it was agreed to appoint Samuel Willson, Esq. one of the Common Council of the city, and Mr. R. Stowell, measurer, to superintend personally the measuring of the ground, the digging of the potatoes and the measuring of them in the most liberal manner, giving 38 quarts to the bushel. The following was the result of the different pieces:

No. 1, at the rate of 1361 bush. 8 quarts.
No. 2, do. do. 3410 do.
No. 3, do. do. 2041 do. 28 do.
No. 4, do. do. 1654 do. 16 do.
No. 5, do. do. 2253 do. 3 do. pr.acre

Average of the whole number of pieces, 1843 bushels 5, 133-161 quarts to the acre. The casting was performed by Benj. B. Allen, A. M. and Mr. Sidney Dunton, Mathematicians.

This may certify that the above is a correct estimate of the rate per acre of which the several lots of A. W. Barnum, (above described by their respective numbers) produced.

BENJ. B. ALLEN.

Vergennes, Nov. 23, 1834.

Owing to the early drought, my first planting, (late in April) proved a failure, producing less than half a crop. In digging some early in July, for family use, I found they had not only ripened prematurely, but had put forth shoots, a second growth. In August I discovered upon these sprouts (which had then risen to the height of from 6 to 8 inches above the surface, assuming the top and appearance of a regular planted Potato,) small potatoes from the size of a pea to that of an ounce ball. I regret exceedingly I had not permitted a drill to have remained until the usual time of gathering in the fall; the experiment might have afforded some valuable information on the subject of growing this most useful of vegetables.

From the frequent experiments I have made, I fully believe that 1000 bushels of potatoes may be raised upon one square acre of land with less than half the expense it usually costs on four acres in the common manner of cultivating them. I would most cheerfully communicate the manner I have adopted, in planting, hoeing, &c., the result of 25 years' experience, aided by the valuable information received from others, but presume, like many useful hints daily published in our public journals, it would be reluctantly read, and readily disregarded and forgotten. A. W. BARNUM.

Vergennes, Dec. 24th, 1834.

THE BREEDER & MANAGER.

A HINT TO DAIRYMEN.—*How they do things in New-England.* The Massachusetts Society for promoting Agriculture, offered 6 premiums among other things, for the best butter, in stated quantities. The New England Farmer contains the report of the Committee "on butter and cheese," offered for premium, on the 3d of December, 1834, in which we find the following observations:—

"The quantity of butter and cheese exhibited, though not greater than on former years, by its qualities convinced the committee that the premiums offered by the society had directed the attention of the farmers to the making and curing it, and in that way had secured the benefit expected. There were twenty-seven lots of butter exhibited for premium."

6 Tubs, Wm. Bachop, Barnet, Vt. This lot the Committee considered very prime and justly entitled to the first premium of $100. Premium awarded accordingly.—Mr. Bachop had a large lot in the hall in addition to that offered for premium, which the Committee did not examine.

6 Tubs, Luther Chamberlain, Westboro', Mass Very prime and considered by the Committee to be entitled to the second premium of $50. *Premium awarded* accordingly.

8 Tubs, Luther Chamberlain, Westboro,' Mass. Very prime.—This lot the Committee considered well worthy a premium, but having given one, they deemed it contrary to the true intent and meaning of the Society to award two premiums to the same Dairy.

The Committee, after a careful examination, awarded the first premium to Mr. William Bachop, of Barnet Vt. It was with some difficulty they decided between this lot and one offered by Luther Chamberlain, both of which were very prime. They based their final decision on the fact that Mr. Bachop's butter was equal, at least, to Mr. Chamberlain's, and, from the manner it was put down, appeared more likely to keep.—His dairy is supplied from twenty-one cows, kept in the usual manner, on grass in summer, and hay and grain in winter,—the milk kept in tin pans, and churned every morning if the weather is warm,—the butter-milk is removed by frequent washings in water, and four pounds salt and one pound sugar used for each hundred weight of butter,—packed in wooden vessels, and set in a cool place.

The Committee found no difficulty in awarding the second premium of $50 to Luther Chamberlain, of Westboro'. The butter from this dairy has long been celebrated. Mr. C. seems to enter into the true object of this exhibition by furnishing a particular description of the manner in which it is manufactured. His letter, though long, is interesting, as coming from a practical man, and the Committee think they need not apologise for inserting it entire.

The Committee have inserted Mr. Chamberlain's letter at length, as a valuable exposition of the manner in which he makes butter, and as an example for others to follow. That he pursues the best course in its manufacture they can have but little doubt, and they feel certain that in attending as he does to quality rather than to quantity, he secures at once both reputation and profit. No stronger proof can be given of this than the fact that his butter which took the second premium sold at auction for a higher price than that to which the Committee awarded the first, which could only be accounted for by the fact that purchasers felt certain that in taking Mr. C.'s butter they obtained a first-rate article, as he suffered none that was inferior to come from his dairy."

MR. CHAMBERLAIN'S LETTER

To the Committee on Butter and Cheese of the Mass. Society for promoting Agriculture:—

My cows subsist entirely on grass in Summer. I salt them three times per week. A little time before I turn them out to grass in the Spring, I give one quart of cob meal to each per day. I give my rowen to them when I first put them up to hay in Autumn;—think my rowen worth more at that season than in the Spring.

Respecting the treatment of Milk and Cream. My milk is set in my cellar at a little distance from the cellar bottom. The cream should be separated from the milk when sweet and should be kept cool. I have a cellar 10 feet square and 9 feet deep in my cellar, where I put ice in hot weather, and there I can make my cream of a right temperature. I have a stove in my upper cellar, so that in cold weather my cream is also of a right temperature. I churn in Summer three days in a week. The butter is taken from the churn as free from buttermilk as possible, then worked with the hand and salted. There can be no ladle to supply the place of the hand. The butter then stands an hour or an hour and a half, when the butter is worked until the buttermilk is entirely expressed; then it is ready to lump. Respecting salt, I always send for the best quality of butter salt, I do not know the name of it. If I get a lot that proves not to be of the best quality, I take it for other purposes, and send again for the best kind; for I think it a very essential thing to have the salt fine, white and of good flavor. The butter should be salted according to the taste of those who are to use it. There are a variety of tastes respecting the quantity of salt. I use no other substance in my butter but salt. I think saltpetre a dangerous article in cheese, and should think it would have a bad effect on butter, though I do not know as I ever saw it tried. Respecting preserving butter in Summer, the vessels should be thoroughly cleansed, and a little salt sprinkled over

the inside of the vessel. It should be kept perfectly tight to prevent the air getting to the butter. When I have kept butter through the Summer, I have put it down in white oak casks, and head them up until they were wanted for use; then unhead the casks and put on a lid. From my own experience I think white oak vessels the best for preserving butter, yet I wish for information from the committee and other gentlemen concerning this thing. Those who buy our butter can best judge what vessels are the best, and if the committee or the trustees of the Mass. Agricultural Society will take the trouble to satisfy themselves as to what vessels are the best, and recommend them to the dairymen, it will be an advantage. Had I known of your exhibition soon enough I would have put up some in pots at the same time I put down in firkins, that you might have a chance to ascertain which is the better.

Gentlemen, I know you love good butter and cheese by your exertions in offering those liberal premiums, and as you have bestowed a good share of them on me, I feel myself under obligation to give all the information that I can to you. The dairymen want to get rich too fast; this is a great reason why you do not have better butter. At this season of the year the cream ought not to stand on the milk more than 12 hours in order to make good butter, of course we do not get but one half of the cream. There will rise another coat of cream, which may be applied to other uses except for butter. It is a practice in all the dairies with which I am acquainted to get all the cream they can; but I see their mistake. Put a quantity of the second skimming of cream to that milk from which the first cream is taken, and it will make about as good cheese as four meal cheese; and I think by not trying to make so much butter, but a better quality and better quality of skim milk cheese, I saved enough the last year to pay my labor on my farm. You cannot expect so nice butter at this season as when we have fresh feed, yet you can see how little variation there is in my butter by that which I now offer for exhibition according to the Nos. beginning at the first. The butter in boxes was made by hay, and some of it of an ordinary quality, as I could not get at my best hay.

The management of cows is also an essential requisite for making good butter. The cows must be kept so as to be clean for milking, or the butter cannot be nice. Cleanliness and prompt attention to every thing are the indispensable requisites for making good butter.

LUTHER CHAMBERLAIN.

[From the New England Farmer.]

Mr. Fessenden.—I send you the following remarks, upon a subject of great interest to the farmer. They are at your disposal to publish in the New England Farmer or not.

ON MAKING BUTTER LATE IN THE FALL.

Such is the general mode of living in this section of the country, that butter is an indispensable article in every family; nor will a small quantity suffice for the various purposes to which it is applied in the culinary art. Hence there is no production of the farm on which so sure calculations upon a ready and profitable market can be made. It is important to the farmer to make the most of his dairy. But there is a certain part of the year in which the process of making butter is so difficult and laborious that the complaint has acquired the authority of an axiom: "That it costs more than it comes to."

I refer to the season of the year when grass feed is failing or gone, the quantity of milk diminished, and the cream is so long in churning, that the butter, if it come at all, is worth little or nothing. It sometimes happens that much time and labor is entirely lost,—no butter can be obtained, and the cream is made worse.

Having thought much on the subject, and experienced all the uncertain rusults of which others complain, I have been led to the conclusion, which experiments have confirmed, that there is a certain degree of heat, could it be ascertained, to which the cream might be raised, which would insure a quick process in the formation and separation of the butter from the whey or milk, at the same time preserves the quality of the butter, and prevents that frothiness and softness which is the never failing result of long continued churning.

To aseertain the degree of heat necessary to insure a short process, we heated the cream on the hearth to about 72 or 73 degrees,—this, with heat in the churn, which was scalded with boiling water, gave to the cream about 75 heat. In six or seven trials, during the months of November and December, the longest process in churning was twenty minutes, the shortest, ten. The butter has been uniformly sweet and hard, and in nothing inferior to that made in October, except in colour. The last churning was on 30th December last. I attended to the whole process carefully. The cream, when first put into the churn, was 80.—I waited till the heat had fallen to 75, and immediately began the operation. The butter was formed and ready to take out of the churn in just ten minutes. By the way, I use, and have for several years, a rocking churn, and think it the best, all things taken into view, that has ever been in use in New England.

I do not pretend to have made sufficient experiments to establish any general and uniformly operating principle, but the experiments I have made, and the results to which they have led, may serve as hints to others to try similar experiments, by which some general principle may be established to render the process of churning in the winter as short and certain as in summer. This is certainly a desideratum in geoponics, and worthy of the attention of the poor man who keeps but one cow, and the rich who keeps a dozen. It deeply interests those who perform the operation of churning, as well as those who share in the benefits. Let every farmer purchase a thermometer,—he will save in one year enough in labor and butter to pay for it, besides the gratification of having always good butter, and a plenty of it, in the winter, provided he has the materials to make it of.

W. ALLEN.

North Andover, Jan. 1, 1834.

N. B. Since writing the above, one of my neighbors, hearing of my successful experiments, called on me to borrow my thermometer to make a similar experiment,—he informed me that their two last trials to make butter, after churning twenty-four hours, had been unsuccessful. They accordingly prepared the cream as above directed, heating to 75,—the butter came in five minutes,—was hard and good for winter butter.

By the Editor. The above is a valuable paper, and establishes a fact of much importance in housekeeping economy. We have frequently recommended, and published the recommendations of others, to warm cream in cold weather, previous to any attempt to convert it into butter. But the temperature to which it should be raised, has not, so far as we know, been ascertained previous to the above-mentioned experiments of our highly esteemed friend and correspondent.

[From the London Lancet.]

LECTURES ON VETERINARY MEDICINE, *Delivered in the University of London by Mr. Youatt*—Lecture XI.

FARCY—IT IS INFLAMMATION AND ULCERATION OF THE ABSORBENTS—ONLY ANOTHER STAGE OF GLANDERS—ITS TREATMENT—LOCAL AND CONSTITUTIONAL—CAUTION AS TO SUPPOSED CURES.

The Absorbents and their function.—I have in due time to describe to you a set of of vessels that are discharging a very important duty—*the absorbents.*—While by means of the arterial capillaries all the secretions are performed, and they are every-where employed in building up the frame, the absorbents are no less diligently at work in taking up and carrying away in their turn every portion and part of it. There is no surface, there is no assignable spot, on which thousands of their little mouths do not open. Here are some beautiful injected preparations of the absorbents of various tissues and organs.

The Absorbents take up the matter of Glanders, and are inflamed by it.—In the discharge of their duty, they not only take up that which is worn out and useless and innocuous, but that which is poisonous and destructive. They open upon the surfaces of the glanderous chancres.—They absorb a portion of the virus which is secreted from these ulcers; and as it passes along these little tubes, they suffer from its acrimonious quality; they are irritated, inflamed, thickened.—Hence the corded veins of the farrier, or, rather, the thickened absorbents following the course of the veins. See in these preparations how closely they do follow them, not only in their smaller and superficial ramifications, but their deeper-seated and larger branches.

The neighbouring Absorbents first affected.—The absorbents in the neighborhood of the inflamed and ulcerated surface are first affected. I have said in a former lecture, that the very chancres run in lines, indicating the path of the absorbents, and in fact being ulcerations of them. The effect is next perceived about the lips and face and neck.

The Valves of the Absorbents.—The absorbents, as well as the veins, are under the influence of the muscles; the contents of these little vessels are, partly, or principally, propelled by the action of the muscles, and therefore the mechanism which is detected in the veins becomes necessary here, that when these vessels are compressed by the muscles, the fluid shall pass in a right direction, and not pursue a retrograde course. Valves, loose duplicatures of the lining membrane, are placed, as you will see in these specimens, at

certain distances, which lie flat on the side of the vessel, and permit the fluid to pass in a direction towards the chest, but belly out, and impede or arrest its progress from the chest.

They become Inflamed and Ulcerated.—Whether the virus retains its sickly character as it travels along the absorbent, and so becomes entangled about these membranous folds, or is, from the pressure of the muscles on the vessel, detained for a while in contact with the valves, the principal inflammation takes place there. There the parietes of the absorbent are most thickened; a mechanical obstruction seems to be formed, and we feel and see many small hard knots, or buds—farcy buds,—and these are likewise at first in the neighborhood of the original disease. They are almost invariably seen about the lips and nose and neck. They are hard, of a scirrhous hardness, more or less tender, and generally with perceptible heat about them. These little tumours, the consequence of inflammation, pursue their usual course—they suppurate, they ulcerate, and the ulcers have the same peculiar character as those on the membrane of the nose; they are rounded, with an elevated edge and a pale surface; they also are true chancres; and they discharge a virus as infectious and dangerous as the matter of glanders.

The Ulceration spreads.—These farcy buds and ulcers are sometimes few and small and stationary. The virus seems soon to extend its force, or is diluted with other matter. At other times they are numerous and spreading and painful; this depends on the quality of the virus and the state of the constitution. This continues for a while: the health of the animal is scarcely affected; the progress of the buds and the ulcers is rapid or slow, depending on various circumstances; but the course is always apparent,—in a direction towards the chest—the natural course of the absorbents; and as the matter is detained at each valve (and there the principal inflammation takes place), yet the inflammation is still to be traced along the whole course of the absorbents, and between each knot is the corded vessel.

Other Absorbents at length involved.—At length the virus reaches the thoracic duct, and mingles with the circulating fluid, and is conveyed with the blood to every part of the frame. It seems not to effect the lining membrane of the artery or the vein; they are not corded, nor do they ulcerate: but it is deposited with the other ingredients of the blood on every tissue and every portion of the frame. Deposited there it is harmless, so far as that tissue or part is concerned; but on that tissue and part, absorbents open, and they take up and carry away this foreign body thus deposited.—The superficial lymphatics first go to work, and they are most susceptible to the empoisonment of the virus; they become corded and knotted at the valves, and they ulcerate, and we have there the farcy bud, and the connecting corded absorbent.

There are a certain set of these absorbents which seem most disposed to take up the poison, or are most readily affected by it, and these are the distant superficial absorbents, and principally those of the inside of the thigh; and the cords appear, and the ulcers break along the course of the principal veins of the thigh, because in company with them the absorbents are found.

The deeper-seated Absorbents affected.—But the action and the mischief are not long confined to the superficial absorbents, the deeper-seated ones are soon implicated—those which open on the cellular texture, or the deeper and minute structure of every part.

Different result of Inflammation in them.—Here the inflammation of the lymphatic assumes another form. There are no valves here, and consequently no knots; neither is the action confined to the larger branches or trunks, but the myriads of capillary absorbents which penetrate every part, become inflamed and thickened and enlarged, and they cease to discharge their function; they neither take up the fluid exhaled on various surfaces, nor the interstitial deposit, which is the usual accompaniment of inflammation in the neighbourhood of the affected vessels, and so there is engorgement of the substance of various parts, swellings of the head, about the chest, of the hinder legs; sudden, painful, enormous; distinguished by a heat and tenderness which do not accompany any other enlargement. It is not merely an accumulation of fluid or interstitial deposit; it is a mass of minute, inflamed, absorbents, and therefore hot and intensely painful.

Complicated mischief.—And now the superficial and the deeper-seated absorbents being involved, a strange aggravation of disease is soon observed; the ulcerations are more rapid and more extensive; they involve not only the valve of the larger absorbent, but whole masses of minute absorbents. The virus is greater in quantity, more virulent, more corrosive. The ulcers run into sinuses about the hock, and under the flexors; difficult to get at, and difficult to treat.—There are discharges of fœtid matter from most or all of them, and from the nose and from the mouth, attended with enlargement, threatening instant suffocation; at other times the inside of the thigh, at others almost the whole frame, presents a mass of ulceration and putridity.

Different in different Horses.—The mode of attack varies considerably in different horses.—Sometimes the animal appears to be nearly or perfectly sound, when, all at once, the farcy ulcers and farcy engorgements appear, and speedily run their course: but in the generality of cases there is some warning, from loss of appetite and condition, and spirits and strength, and the gradual appearance of the corded absorbent and the knotted valve about the face or the neck, and slight swellings of the limbs, giving far more pain than their external appearance would account for.

Does Farcy exist without previous Glanders?—We have been told that farcy exists without previous glanders. I am not disposed to deny, that something almost amounting to this may have occurred; but they who tell us that it is of such frequent occurrence forget, or are not aware of, the long-continued insidious stage of glanders; the time which may elapse, and often does elapse, before the owner is aware, or the veterinary surgeon sure of it; how possible it is that minute ulceration may have for a considerable period existed in some of the recesses of the nose, or that the slight discharge, undreaded and unrecognised, yet vitiated, poisoned, and capable of communicating the disease to others, may have been long absorbed and carried through the frame, and affected the absorbents, and prepared for the sudden display of farcy.

Farcy ultimately combined with Glanders.—One thing is undeniable, that farcy does not long or extensively prevail without being accompanied by glanders; that in the majority of mild cases of farcy, glanders may be seen if looked for; and that it never destroys the animal without plainly associating itself with glanders.

The true theory of Farcy and Glanders.—Farcy and glanders are in fact stages of the same disease. Glanders, when recognisable by ulceration, is farcy of the Schneiderian membrane,—inflammation of the absorbents of that membrane, and ulceration at the valves of those absorbents. Carefully examine this splendid specimen. There are hundreds of chancres on the septum; but where do you find them?—Precisely along the course of the venous, and consequently absorbent, trunk. If they deviate from this situation, it is in lines, following the course of the smaller vessels. It is a disease of the absorbents,—it is farcy—but now confined to the Schneiderian membrane, and while so confined, continuing to be designated by the term glanders;—when spreading to other parts of the frame acknowledged to be true farcy. They are, I say, different stages of the same disease. If I were compelled to point out the precise line of difference between them, I should say that glanders was inflammation of the membrane of the nose, producing an altered and poisonous secretion, capable of communicating the disease to other horses, and to the malignant influence or effects of which the lining membrane of the absorbents was peculiarly sensible; and that when sufficent of this vitiated secretion had been taken up to produce inflammation and ulceration of the absorbents, farcy was established. Glanders has reference to the membrane of the nose, and farcy to ulceration of the absorbent, produced by a virus discharge from that membrane. They may both be said to be local; but, under the second form, so extensive a surface is diseased that the constitution is speedily undermined.

Its progress is occasionally very capricious,—as slow or as rapid as we used to say glanders was; continuing in a few cases for months and years, the vigour of the horse remaining unimpaired, and at other times running on to its fatal termination with a rapidity perfectly astonishing.

Singular and most important Invention.—Mr. Parker, of the state of New York, has disvovered a composition which will harden like a stone, and yet may be worked in a state as easily as mortar! Exposure to the weather causes it to petrify and become actual stone, requiring a heavy blow with a hammer to break it. A specimen may be seen at Mr. Garfield's shoe store, in Congress street, who is agent for Mr. Parker in this city. Mr. P. has recently completed a section of Canal as a specimen of that intended to bring water near New York from the Croten river. It may be cast in moulds in the form of pillars, fire places, vestibules, &c. and is not dearer than brick. Its value is incalculable for buildings, cisterns, &c. situate in wet or damp places. It is undoubtedly one of the most important inventions of the day. The American Institute have awarded Mr. Parker a gold medal.—*Troy Chronicle.*

THE GARDENER.

[From the Horticultural Register]

ON THE IMPORTANCE OF CULTIVATING GOOD FRUIT.

Cultivators, generally speaking, in this country, do not seem to be aware of the importance of cultivating the best varieties of fruit. They generally consider the article as a *mere luxury*, and, therefore, give but little attention to its culture.—But though fruit is not *indispensable* to the support of human existence, and life may be sustained on aliment less palatable and less wholesome, it is, nevertheless, a very useful article, and one of the best gifts of Providence to the human being.

A writer in the Annales d'Horticulture observes that "One of the best aliments, and the best appropriated to the different ages of life, is that which fruits afford. They present to man a light nourishment, of easy digestion, and produce a chyle admirably adapted to the functions of the human body. * * *

"There are fruits, which, when perfectly ripe, can be eaten even to excess without inconvenience. Such as grapes, cherries, and currants; the other kinds never occasion ill consequences if they are eaten only to satisfy the demands of nature. They are injurious when large quantities are taken into the stomach, already filled with other food. There are certain stomachs, with which fruits do not equally well agree, but still they are not injurious if taken with moderation.

* * * *

"Thoroughly ripe fruit, eaten with bread, is perhaps the most innocent of all aliments, and will even insure health and strength. The author of this article has made the experiment. He passed a whole year without taking any other food than fruit, bread, and water, without his power or vigor having been diminished in the least, notwithstanding the great exercise which he constantly took.

"In traversing the territories of Germany, there is to be seen near each habitation, a vineyard or a garden of fruit trees. The villages are surrounded with them, and there are but few families who do not make use of fruits during the summer, and preserve a certain quantity for winter. The surplus is sold in the cities. There are to be seen upon the Rhine, and other rivers in Germany, boats laden with dried apples, pears, and plums. These fruits are objects of considerable commercial importance. It is desirable that the departmental horticultural societies should offer premiums to encourage the proprietors of small estates to plant fruit trees of the best kinds.

"As the belief is general that fruits produce diseases, and especially the dysentery, we think it our duty to introduce the following passage in relation to this subject, which is to be found in *advice to people upon their health*, by Tissot.

"There is a pernicious prejudice, with which all are too generally imbued:—it is that fruits are injurious in the dysentery, and that they produce and increase it. There is not, perhaps, a more false prejudice.

"Bad fruits, and those which have been imperfectly ripened, in unfavorable seasons may occasion colics, and sometimes diarrhœas,—oftener constipations and diseases of the nerves and skin, but never epidemic dysentery. Ripe fruits of all kinds, especially in the summer, are the true preservatives against this malady. The greatest injury they can do is in dissolving the humors, and particularly the bile, of which they are the true solvents, and occasion a diarrhœa. But even this diarrhœa is a protection against the dysentery. It has not been observed that this disease is more common during those seasons when fruits are very abundant. It is also believed that it is more rare and less severe than heretofore, and this can surely be attributed if it is true, but to the more numerous plantations of fruit trees, which have rendered fruit very common.

"Whenever dysentery has prevailed, I have eaten less animal food and more fruit, and have never had the slightest attack. Several physicians have adopted the same regimen.

"I have seen eleven patients in the same house; nine were obedient to the directions given, and ate fruit; they recovered. The grand-mother, and a child she was most partial to, died. She prescribed burnt wine, oil, powerful aromatics, and forbade the use of fruit; it died. She followed the same course, and met the like fate.

"This disease was destroying a Swiss regiment, which was stationed in a garrison, in the southern part of France. The captain purchased the grapes of several acres of vines. The sick soldiers were either carried to the vineyard, or were supplied with grapes from it, if they were too feeble to be removed. They ate nothing else; not another died,—nor were any more attacked with the complaint after they commenced eating grapes.

"A minister was attacked with the dysentery, and the medicines which were administered gave no relief; he saw by accident some red currants, and had a great desire to eat them; he ate three pounds between seven o'clock in the morning and nine o'clock in the evening; he was better during the day, and entirely cured the next.

"I could accumulate a great number of these facts, but the above are sufficient to convince the most incredulous. Far from prohibiting the use of fruits when the dysentery prevails, too many of them cannot be eaten. The discretion of the police, instead of interdicting them, should cause the markets to be abundantly supplied with them. This is a truth, which intelligent persons no longer doubt. Experience has demonstrated it, and it is founded in reason, since fruits remove all the causes of dysentery."

Willich's Domestic Encyclopedia observes that "apples, besides their aromatic qualities, are wholesome and laxative when fully ripe. In diseases of the breast, such as catarrhs, coughs, asthmas, consumptions, &c. they are of considerable service; for these beneficial purposes, however, they ought not to be eaten raw, but either roasted, stewed, or boiled; they also may be usefully employed in decoctions, which, if drank plentifully, tend to abate febrile heat, as well as to relieve painful strictures, in pectoral complaints."

There are many uses for fruit, which do not appear to have become so general in this country as could be wished. In France, bread is made consisting of one-third of boiled apple-pulp, baked with two-thirds flour, properly fermented with yeast for twelve hours. This bread is said to be very fine, full of eyes, and extremely palatable and light.

Apples and other good fruit ameliorate the taste and the tone of the human system. "The palate," says Mr. Knight the celebrated English horticulturist, "which relishes fruit, is seldom pleased with strong fermented liquors; and, as feeble causes continually acting, ultimately produce extensive effects, the supplying the public with fruit at a cheap rate would have a tendency to operate favorably both on the physical and moral health of the people."

It has been ascertained that apples make an excellent food for swine, cattle, &c. Some assert that not only sweet apples, but sour apples are valuable for that purpose, especially, when boiled and mixed with potatoes or other roots.

If, then, fruit has valuable uses, not merely as a luxury, but as an article both of food and medicine, it must be of much importance to propagate the best varieties. It is not more expensive to raise the best than to cultivate those which are comparatively worthless. We are, therefore, much gratified in being able to place before our readers the following valuable article, by R. Manning, Esq. of Salem, Mass.

Mr. Fessenden,—Sir, Inquiries having been made for a list of Fruits, adapted to the climate of New-England, the Fruit Committee of the Massachusetts Horticultural Society offer to the public the following list of Apples, Pears, Plums, and Peaches; all of them good, and many of them excellent. They do not wish to be understood as saying that the list contains *all* the fruits worth cultivating, but they prefer to recommend a few sorts known by experience to be good, to a large number of doubtful names, whose merits have not been sufficiently tested. Additions will be made to the list after the close of the ensuing fruit season, which will be published in the New-England Farmer. All of the fruits enumerated, have been exhibited at the meeting of the Horticultural Society; bearing trees of most of them are now growing in the gardens of the members of the Committee, and trees can be had at any of the Nursery Establishments in the vicinity.

It may be proper to remark also, that the time of maturity, of the different varieties, is designated in nearly all the nursery catalogues, a point of much importance to be attended to, with a view to a regular succession of fruit, as well as the fact that there are some kinds embraced in this list, which, although it would be very desirable for every fruit grower to possess a single tree, could, by no means, be recommended for extensive cultivation, whilst others may be cultivated to any extent desired. These points, as well as the relative degrees of excellence between good, better, and best applicable to the different varieties, must be left to the taste of the cultivator, which, in the advanced state of knowledge upon the subject, it is pesumed, almost every one has within his reach the means of determining correctly.

APPLES.

Early Harvest,	Red Astracan,
Red Margaret,	Kilham Hill,
Bough,	William's Favorite,
Summer Rose,	Murphy,
Summer Queen,	Hubbardston Nonesuch,
Summer Pearmain,	Ortley,

Drap d'Or,
Fall Pippin,
Doctor or Dewitt,
Hawthorndean,
Pennock's Red Winter,
Baldwin,
Lady, Pomme d'Api,
Yellow Bellflower,
Ribstone Pippin,
Rhode-Island Greening,
Roxbury Russett,
Porter's Favorite,
Eppes's Sweet,
Benoni,
American Red Juneating,
Stump of Boxford,
Lyscon,
Jonathan,
Wine,
Yellow Ingestrie.
Red Ingestrie.

PEARS.

Little Musk,
Amire Johanet,
Madeline,
Epargne, (Jargonelle,)
Skinless,
Julienne,
Long Green,
Rouselette de Rheims,
Prince's Sugar,
Lowry's Bergamot,
Moorfowl's Egg,
Autumn Bergamot,(Eng)
Washington,
Fulton,
Heathcote,
Green Sylvanche,
Johonnot,
Napoleon,
Passe Colmar,
Raymond,
Saint Ghislein,
Urbaniste,
Wilkinson,
Colmar Souverain,
Bergomaster,
Buffum,
Seckle,
Harvard,
Red Bergamot, (French,)
Chaumontelle,
Beurre Diel,
Beurre Knox,
Bleecker's Meadow,
Bartlett,
Capiaumont,
Cushing,
Dix,
Angouleme,
Summer thorn,
Andrews,
Dearborn Seedling,
Surpasse Vergalieu,
Naumkeag,
Golden Beurre of Bilboa,
Wilbur,
Cumberland,
Knight's Seedling,
Capsheaf,
Winter Orange,
L'Echasserie.

PLUMS.

Green Gage,
Washington,
Prince's Imperial Gage,
Orleans,
Smith's Orleans,
Bingham,
Elfry,
Coe's Golden Drop,
Bleecker's Gage,
Italian Damask,
Peach,
Semiana, (of Boston,)
Royale de Tours,
Pond's Seedling.

CHERRIES.

May Duke,
Black Tartarean,
Black Heart,
White Biggareau,
Davenport,
Graffian,
Late Duke,
Downer's Late Red,
Black Eagle,
Belle de Choisy,
White Tartarean.

PEACHES, FREESTONES.

Early Ann,
Early Royal George,
Large Early Red Rareripe,
Coolidge's Favorite,
Morris's White,
Old Mixon,
Gross Mignonne,
Red Magdalen,
Yellow Rareripe,
Yellow Alberge,
Malta, Belle de Paris,
Belle de Vitry,
Nivette,
President,
George Fourth,
White Blossom, (Snow,)
Van Zandt's Superb,
Washington,
Yellow Red Rareripe,
Teton de Venus,
Heath, (Kenrick's,)
Well's Seedling,
Hoffman's Favorite,
Barrington,
Clingstone,
Kennedy's Lemon,
Old Newington,
Williamson,
Spanish,
Hyslop's,
Heath,
Congress.

[From the same.]

NEW FRUITS.

The desire has often been expressed and a call more or less imperative is often made, for a select list of fruits, a limited number, of *the best possible kinds*. It is evident, however, that, at this early day, such calls may be premature, inasmuch as no select list can consistently be offered, except of such kinds only as have been proved in our country. But as many of the new kinds of fruit of the highest character, have not as yet borne fruit in our country, and must therefore be excluded, it must be obvious, that such lists will from time to time require a revision.

Such a select list as we should be truly desirous of offering to the public as *the very best possible*, cannot yet be formed, till all the new and finest kinds, which this extraordinary age has produced, have been here put to trial.

Effectual measures are now in train, which it is to be hoped may bring them all—a host in numbers, in names, and in excellence.

Last spring, and late in May, through the distinguished liberality and philanthropy of the celebrated Professor Van Mons of Louvain, Mr. Manning and myself received over three hundred select varieties of new Flemish Pears, of the first class for excellence, very many of which, had not yet been disseminated even in Europe. But although every exertion was used, we were yet enabled to save, unitedly, not over one hundred kinds; and, through the liberality of the London Horticultural Society, we also received over fifty new kinds of Pears, besides some other varieties, chiefly Flemish, and which have been proved, in their celebrated garden of Chiswick, to be of great excellence. This number, and from this source, we have also been enabled to save. We look, however, for the renewals, and to complete our lists from both sources of all that is excellent.—All these will be put to immediate trial; and the results the public may in due time depend on knowing.

During the last thirty years, more kinds of pears, of celebrated excellence have originated in Belgium, than all that ever existed before. This is principally to be ascribed to the distinguished zeal and successful experiments of Van Mons, and of Hardenpont, of Coloma, of Meuris, of Nelis, of Duquesne, of Dorlain, of Liart, and of others.

Dr. Van Mons and the Abbe Duquesne are stated to have originated more than eight hundred fine kinds of pears, with experiments on eighty thousand, and on a vast scale. Their practice seems to have been, in many respects, the reverse of all the popular theories of the day—the results unlike any thing of the kind before known.

WILLIAM KENRICK.

Newton, Dec. 24, 1834.

Cure for Weak Eyes.—Take a small lump of white copperas, say about the size of a pea; put it in a small phial, holding about two ounces of water; carry this in the pocket, and occasionally taking out the cork, turn the phial upon the finger's end, and thus bathe the eyes. This will positively effect a real cure in a short time.

Fine light ashes from coal grates answers well for cleaning and brightening tins, brasses, &c.&c.

MISCELLANEOUS.

APPLE TREES BEARING ALTERNATE YEARS.

Those who have had any thing to do with orchards, or who have paid any attention to apple trees, know very well that some trees will not bear a full crop every year. The cause of this is probably the exhaustion of the trees during the bearing year. In those years the tree hangs very full indeed—all its powers are put forth to bring forth and ripen such a heavy crop; and this expense of sap or other matter, so exhausts the system that it requires a year of rest to bring up its energies. This may or may not be the true cause; at any rate the fact is well known; and many who have good varieties of apples have regretted that they could not change this state of things in regard to particular trees, and have a crop every year. Mr. D. Longfellow, of Winthrop, well known as a successful orchardist, informs us that he has succeeded in changing this habit in a variety of Juneatings which he had in his orchard, which bore alternately. His manner of doing it, is this:

Having other trees which also bore alternately, but not in the same year with the Juneatings, he was convinced that engrafting the two others, the habits of one would counteract that of the other, and a 'nullification' of them be produced. Accordingly, on a bearing year of the Juneatings, he took scions from them, and engrafted them into stocks which would that year be barren. The result in the cases which he has tried, justifies the conclusion which he had drawn, and he has Juneatings every year.

Whether it is necessary that the scion to be engrafted should be taken from its parent on the fruitful year or not, we cannot say, or whether this system will be attended with similar result in all the trees which bear in this way, or have barren and fruitful years, we are not able to say. It is, however, a subject worth attending to; and we should be happy to learn any facts from those who have had experience in these things.—*Maine Farmer.*

M. Road, the director of a white lead manufactory in France, has introduced the use of sulphurated lemonade among his workmen, and the lead colic has in consequence disappeared from his establishment. The lemonade is used both as a beverage and as a lotion.

One of the eastern papers states that during the late severely cold weather, chickens were frozen to death on their roosts.

CONTENTS OF THIS NUMBER.

Coal Screenings and the peach tree worm—Bene seed and plant—Mrs. Bogue—The eye—Cure for cattle and horses that have eaten too much grain—Manufacture of sugar from the beet—Woodsides's revolving harrow and seed cart—Use of lime in agriculture—Experiments in growing potatoes—Premiums on butter in Massachusetts—On making butter in cold weather—Youatt on Glanders—New invention for *making stone*—On the importance of cultivating good fruit—New fruits—Apple trees bearing alternate years—Cure for weak eyes—Preventive of the lead colic—Scrap—Prices current—Advertisements.

BALTIMORE PRODUCE MARKET.

☞ *These Prices are carefully corrected every* MONDAY.

	PER.	FROM	TO
BEANS, white field,	bushel.	2 00	2 50
CATTLE, on the hoof,	100lbs.	4 75	5 75
Slaughtered,	"	3 00	4 00
CORN, yellow,	bushel.	63	64
White,	"	62	—
COTTON, Virginia,	pound.	12	17½
North Carolina,	"	14	16
Upland,	"	16	18½
FEATHERS,	pound.	35	37
FLAXSEED,	bushel.	1 62	1 75
FLOUR—Best white wheat family,	barrel.	6 00	6 50
Do. do. baker's	"	5 50	6 00
Do. do. Superfine,	"	4 75	5 00
Super Howard street,	"	4 62	4 75
" " wagon price,	"	4 50	—
City Mills, extra,	"	4 87	5 00
Do.	"	4 70	—
Susquehanna,	"	—	—
Rye,	"	—	—
GRASS SEEDS, red Clover,	bushel.	5 00	5 50
Timothy (herds of the north)	"	2 50	3 50
Orchard,	"	3 00	—
Tall meadow Oat,	"	2 00	2 50
Herds, or red top,	"	1 25	—
HAY, in bulk,	ton.	16 00	—
HEMP, country, dew rotted,	pound.	6	7
" water rotted,	"	7	8
HOGS, on the hoof,	100lb.	5 00	—
Slaughtered,	"	5 50	—
HOPS—first sort,	pound.	15	—
second,	"	13	—
refuse,	"	11	—
LIME,	bushel.	30	33
MUSTARD SEED, Domestic,	"	5 00	6 00
OATS,	"	30	33
PEAS, red eye,	bushel.	—	—
Black eye,	"	87	1 00
Lady,	"	100	—
PLASTER PARIS, in the stone,	ton.	3 00	—
Ground,	barrel.	1 37	—
PALMA CHRISTA BEAN,	bushel.	1 50	1 56
RAGS,	pound.	3	4
RYE,	bushel.	62	65
TOBACCO, crop, common,	100 lbs	4 25	5 00
" brown and red,	"	5 00	7 00
" fine red,	"	7 00	9 00
" wrappery, suitable for segars,	"	6 00	12 00
" yellow and red,	"	8 00	12 00
" yellow,	"	9 00	12 00
" fine yellow,	"	12 00	16 00
Seconds, as in quality,	"	4 00	5 00
" ground leaf,	"	5 00	9 00
Virginia,	"	5 00	10 00
Rappahannock,	"	—	—
Kentucky,	"	6 00	9 00
WHEAT, white,	bushel.	1 05	1 10
Red,	"	1 00	—
WHISKEY, 1st pf. in bbls	gallon.	28½	29½
" in hhds	"	28	—
" wagon price,	"	24½	25
WAGON FREIGHTS, to Pittsburgh,	100 lbs	—	1 50
To Wheeling,	"	—	1 75
		washed.	*unwash*
WOOL, Prime & Saxon Fleeces,	pound.	50 *to* 60	24 *to* 26
Full Merino,	"	44 50	22 24
Three fourths Merino,	"	37 44	22 24
One half do	"	33 37	22 24
Common & one fourth Meri.	"	30 33	20 22
Pulled,	"	31 33	22 24

A FINE BULL.

FOR SALE, a young Bull, ten months old, sired by the thorough bred bull Apollo, (of the Gloster Stock) and out of a very fine cow of seven-eighths Durham S. H. blood, consequently fifteen-six teenths Durham S. H., is for sale a bargain if immediate application be made; he is truly a splendid calf, and will be sold for $100 cash.

Apply to I. I. HITCHCOCK,
jan 13 American Farmer Establishment.

BALTIMORE PROVISION MARKET.

	PER.	FROM.	TO.
APPLES,	barrel.	$3 00	$5 00
BACON, hams, new,	pound.	11	—
Shoulders,	"	8	9
Middlings,	"	—	—
BUTTER, printed, in lbs. & half lbs.	"	25	37
Roll,	"	15	25
CIDER,	barrel.	—	—
CALVES, three to six weeks old	each.	3 00	6 00
COWS, new milch,	"	17 00	30 00
Dry,	"	6 00	10 00
CORN MEAL, for family use,	100lbs.	1 50	—
CHOP RYE,	"	1 50	—
EGGS,	dozen.	19	20
FISH, Shad, salted,	barrel.	5 75	6 00
Herrings, salted, No. 1,	"	4 75	—
Mackerel, No. 1, 2 & 3,	"	5 12	7 00
Cod, salted,	cwt.	2 50	3 00
LAMBS, alive,	each.	1 25	2 00
Slaughtered,	quart'r	31	50
LARD,	pound.	8	9
ONIONS,	bushel.	62	75
POULTRY, Fowls,	dozen.	1 50	2 25
Ducks,	"	—	2 50
POTATOES, Irish,	bushel.	40	62
Sweet,	"	—	—
TURNIPS,	"	37	50
VEAL, fore quarters,	pound.	3½	4
Hind do.	"	6¼	—

ADVERTISEMENTS

GOOSEBERRY TREES.

THE subscribers have just received from England, in fine order, 500 Gooseberry, of two and three years growth, raised with single stem, consisting of twenty of the best and largest varieties of the usual assorted colors, regularly named, and as they were obtained from a very respectable nursery, immediately in the neighborhood, where the largest and best Gooseberries are raised, we have no doubt of their being a very superior parcel; price per tree 31¼ cents, or $3 per dozen. Also, by the same vessel, 500 each European Lime or Linden and Larch Trees, 3 to 4 feet high, all which are planted in our Nursery, where we have a large stock of Nursery articles, of which we name the following: Of the Ornamental Trees, Chinese Ailoanihus, or Tree of Heaven, Silver leaved Maple, Sugar Tree, and the European Linden or Lime Trees, all from 8 to 12 feet high, well suited for planting in steets, &c. Of Shrubs, we have the Europran and India Roses Current, Gooseberry and Strawberry, of all the best varieties; also Apple, Pear, Plumb, Peach, Apricot, Nectarine, Quince, English Walnut, and the deservedly celebrated Catawba, and other Grape plants of two years old, by the hundred, dozen or single plant, and as we cultivate the largest proportion of the Catawba, we can dispose of cuttings of that kind low, by the thousand, provided orders are received by trimming time. Thorn Quick Pyrocanthea and Honey Locust, for hedges: Asparagus, Hop and tart Rhubarb roots, Flowering Vines, and an extensive assortment of superb double Dahlias. For prices and other useful particulars, see our Catalogue, to be had gratis at the Nursery, or at the Store, Light street, near Pratt street, Baltimore, where orders will be promptly and carefully attended to. SINCLAIR & MOORE.

Feb. 3, 1835.

SUPERIOR CATTLE FOR SALE,

OF the Devon, and Devon & Short Horn blood, at Brookland Wood Farm, the residence of Richard Caton, ten miles from Baltimore, on the Susquehanna Rail Road, and on the Falls Turnpike Road, consisting of

Devon Bulls, Heifers and Calves, of all ages of each denomination, from 8 months to 4 years—price, forty to one hundred dollars each, according to age and quality.

Devon and Durham Bulls, the offspring of Devon Cows, by the Short Horn Durham Bull Tecumseh. It is supposed by those persons in England who have dairies of this species, that they will be found superior to all others, uniting the beauty of form, hardiness of constitution, propensity to fatten, and richness of milk appertaining to the Devon blood, and product of milk of the Durham—price, forty to one hundred dollars. Apply to

Feb. 3, 1835. THOMAS BEVAN, Manager.

BENE SEED.

JUST RECEIVED at this Establishment, and for sale, by the pound or in 12½ cent papers, a small quantity of the seed of this most valuable plant. It is very efficacious in the Bowel Complaints of children, and not difficult to be administered. The seed should be planted in April, in hills like beans, and the leaves will be in perfection in June. Two or three beans being put into a tumbler of spring water, for 10 or 15 minutes, convert it into a mucilage, which being tasteless, children readily drink.

Feb. 3.

FRUIT TREES—CHEAP.

FOR SALE very low the followlng Fruit Trees, being part of an invoice missent. There are 58 trees in all, *in perfectly good order*, and they will be sold for $10 Cash.

APPLES.

2 Monstrous Pippin.
2 Royal Pearmain.
2 Long Island Russet.
2 Winter Pearmain.
2 Carthouse.
2 Bellflower.
2 Vandevere.
2 Red sweet Vandevere.
2 Michael Henry Pippin.
1 Winesap.
6 York Greening.
7 Red Streak.

PEACHES.

1 Teton de Venus.
4 Malcaton.
1 Lehman's cling.
2 Gough's Cling.
3 Oblong open Peach.
1 Fine Cling.
2 Early Etna.

CHERRIES.

2 Oxheart
2 York Duke
2 Tartarian
2 Red heart
2 Bleeding do

QUINCES.

1 Portugal.
1 Orange.

I. I. HITCHCOCK.
Feb. 3. Amer. Farmer Establishment.

AMERICAN FARMER ESTABLISHMENT,

No. 16 S. Calvert street, Baltimore, Md.

COMPRISING a Stock and Experimental Farm; a Nursery and Seed and Flower Garden; a Store for the sale of Field and Garden Seeds and Agricultural Implements and Books; a general Agricultural and Horticultural Agency; the Publication Office of the "Farmer & Gardener, and Live Stock Breeder & Manager," and of "Hints to Farmers;" and an Office of APPLICATION for Farmers, Gardeners, Overseers, Managers, &c.

I. IRVINE HITCHCOCK, *Proprietor.*

This establishment is now in full and successful operation, nearly every department, especially that of seeds, being well supplied with articles of the most desirable quality.

Orders by wholesale or retail will be promptly executed on terms that cannot fail to give entire satisfaction to purchasers.

As the limits of an ordinary advertisement preclude the possibility of conveying an adequate idea of the variety and the value to the cultivator and dealer in seeds, of the contents of this establishment, a comprehensive and descriptive PROSPECTUS AND CATALOGUE has been printed and will be sent gratis to any gentleman who will transmit to the proprietor his address (post paid) for that purpose.

GRAPE VINES.

HERBEMONT'S Madeira, one, two, and three years old, from 25 cents to 75 each.
Isabella, two and three years old, at 25 to 50 cts each.
Catawba, one year old, 25 cts. each.
White Scuppernong, two years old, at 37½ cents each.
Sultana, one year old, at 50 cts. each.
Woodson, two years old, at 37½ cents each.
Red Bland, one year old, at 25 cts. each.
Are for sale at this establishment, and will be well packed to go any distance. no. 25

THE FARMER & GARDENER;

AND LIVE-STOCK BREEDER & MANAGER.

CONDUCTED BY I. IRVINE HITCHCOCK, AND ISSUED EVERY TUESDAY FROM THE AMERICAN FARMER ESTABLISHMENT, AT $5 PER ANNUM, IN ADVANCE

No. 41. **BALTIMORE, FEBRUARY 10, 1835.** **Vol. I**

☞This publication is the *successor* of the late
AMERICAN FARMER,
(which is discontinued,) and is published at the same office, at five dollars per year, payable in advance.
☞When this is done, 50 cents worth of any kind of seeds on hand will be delivered or sent to the order of the subscriber with his receipt.

American Farmer Establishment.

BALTIMORE: TUESDAY, FEBRUARY 10, 1835.

HEMSTEAD CO., ARKANSAS TERRITORY, *January* 10, 1835.

To the Editor of the Farmer and Gardener:—

SIR—Inclosed you will receive $5, as payment for the first volume of the Farmer and Gardener—the payment is tardy, but I presume not unacceptable. Indulgence may be granted on account of our distance from market, making money scarce.

I am situated on the extreme border of civilization, in the south west corner of the U. S. Territory; a district of country but newly settled, a "*land of shades*," through which but few of the rays of science have yet penetrated, or been appreciated by the *half-hunter farmer*—consequently you can expect but little agricultural information from this region, that would be practically *useful* to the Maryland farmer, yet it may not be uninteresting to the farmer on old worn out land, to be told how the backwoodsman makes himself a new farm in the woods. The scene is daily occurring around me, and I can describe it as it exists. A spot of good land is selected, convenient to some spring or creek, and where the *range* (native pasture) is unbroken. In a few days a log cabin is erected, floored with split slabs, and furnished with a chimney of sticks and mud, for the accommodation of a family. The small saplings and brush are cut away, and the large trees are girdled. Rails are split, and during the fall and winter months a little field is prepared in season for the plough. One industrious man is able to prepare in this way, ten acres, which with two slight ploughings, will produce the first season 200 bushels of corn—a supply for the coming year. After the working of the crop is done, he extends his field—repairs his cabin—builds other cabins, and during the second year, his surplus crop will defray all needful expenses. His cattle and hogs find an ample supply of food in the woods and prairies all the year—the growth and increase of which yield a handsome profit—little attention being paid to them more than to keep them gentle, as there is generally a mash sufficient to fatten them. Horses need no feeding, except when in use. The trees left standing in the field in the first instance, are seldom cleared away till they fall of themselves, in the mean time, the shedding of the rotten limbs and bark, affords an excellent manure. Indian corn is the principal bread stuff and provender. In this manner, an industrious and frugal family become comparatively wealthy in a few years, and give encouragement to the poor and laboring classes in the older states to emigrate. Our staple for market is cotton, nearly a bale of which will grow on an acre of our best land. Corn, from 30 to 60 bushels to the acre. All different grains, vegetables and fruits, that grow in the middle states do equally well here; and it is only for want of convenient mills, and other apparatus for cleaning and grinding wheat, that we eat corn bread. Our lands are extremely easy to cultivate—one hand being sufficient for 20 acres of corn, or 15 of cotton, and it is no unusual thing for one hand to raise 1000 bushels of corn in a season. With us, labor is the desideratum, and land a drug. Good land in any quantity, in its natural state, can be bought for $1 25 per acre, whilst it costs of hired labor $10 an acre, to put it in cultivation. Labor is worth at this time $20 a month. The question with your farmers might be, whether it is cheaper to bring their old worn out lands into heart, with great labor and expense, or sell them for what they will fetch, and emigrate to new lands, that are already rich. As there must be diversity of opinion on the subject, the condition of each party may be improved, by following its own choice. Though the emigrant should be apprised, that for the advantage of new land, that is rich, and cheap, he sacrifices much of the enjoyments of life, by leaving what are *not worn out*, the convenience of market, and those social, moral, literary, and scientific institutions, which only grow with the age of a country.

I must claim your gratuity of Gama Grass seed, and intend communicating to you the result of my experiment with it. And can I also procure from you other seeds, which are of great consequence here, but are with you, cheap and plenty, by paying my own postage for them? The seed of the Morus Multicaulis, for instance. My silk-worms have done well on the native mulberry, from the woods, but when I cultivate feed for them, I might as well have the best. The seed of the White Poppy, also, for Opium would be desirable.

I have written in haste, but if you see any thing worth extracting for your paper, you are at liberty to correct the phraseology as you please. All my papers come extremely irregular; sometimes two or three at a time, and then no more in two or three weeks—the fault of post masters, no doubt. No 28, is entirely missing, and I would be glad to receive it.

Sincerely your friend, and well wisher to your undertaking, NATHAN D. SMITH.

We heartily thank our friend for his letter, as well as for the inclosure, and assure him, that we shall be glad to receive communications from him as often as he can make it convenient to favor us with them. Scenes and sketches of life in the far west, could not fail to be interesting to our readers.

We send a few seed of the Gama Grass by mail, and will gladly forward others in like manner—but from what our correspondent says of the irregularity with which his papers reach him, we have some misgiving about the safe arrival of such packages. His request for the seed of the Morus Multicaulis, is but one among many similar ones—and we take this opportunity to observe that the seed of this is not to be had. It appears also, from the deliberations of the French Royal Society of Agriculture, which we find noted in the Farmer's Register, that the Chinese mulberry is not a distinct species; that its seed will not produce its like, and as a valuable variety cannot be preserved except by multiplying it by cuttings, grafts or layers; and that it is exclusively by these means the Chinese cultivators have reared this tree from time immemorial. Seeds sown near Venice have produced varieties, but none like the Morus Multicaulis.

The number of horses in the state of Ohio, according to the official tax lists, is 232,662. Of horned cattle there are 413,974. The nett proceeds of the State Canals paid into to the treasury were, last year, $191,444 51.

THE FARMER.

[From the Genesee Farmer.]

ON DRAUGHT.—BY QUERCUS.

It may be recollected that while treating upon the qualities and history of the Horse, I alluded not unfrequently to the subject of *draught*, as being an interesting topic of investigation. More recently I have had occasion to examine the subject with some care, with especial reference to canals and canal transportation. To a superficial observer, the subject promises nothing of interest; and even to more reflecting minds, it is often passed by, as a matter familiar to all, and requiring no special consideration. The application of animal power in the conveyance of property, is indeed an every day occurrence, and we are all constantly in the habit of applying principles and using expedients, for which we can give no more satisfactory reason, than that they answer our present purpose. The slightest reflection however, will readily convince us, that the use and application of *power*, in every possible shape, must involve many important principles.

I do not propose, at present, to discuss this topic in all its varied applications, nor to investigate or explain the numerous philosophical principles with which it is connected; but merely to offer some plain reflections upon the result of my inquiries; and if they shall afford any gratification to the readers of the Farmer, they are heartily at their service.

Draught, in the sense I shall here use it, is the moving of any substance, by *dragging*. The subject is usually divided into three parts; first, the *power to be applied;* second, the *substance* or *vehicle to be moved;* and third, the *channel of conveyance.*

The first of these divisions embraces a wide field of investigation, inasmuch as the application of power is co-extensive with the works of nature.

Power, in the abstract, is a mysterious and inexplicable principle, and far beyond the reach of our comprehension. Its *application* however, in all the varied operations of nature and art, and the laws which govern this application, have been subjects of philosophical investigation, from time immemorial. This must ever be the extent of scientific research; for the moment we pass these boundaries, we are lost in the contemplation of Omnipotence.

Aside from Deity, the great author of all power and motion, we know nothing of their origin or cause; and it is curious to notice, how strangely philosophers and sages have argued and reasoned on this subject, until within a few years; simply by mistaking the effect for the cause. If we reflect a moment, upon the cause of our own locomotion, we shall at once perceive, that what is usually called *animal power*, and concerning which so much has been written, as a *first cause* of motion, is after all, something we cannot fathom. When a person, from a state of perfect inaction, sets his body in motion, he exerts great *animal power;* but this is only its effect, and not the cause. Suppose a man throws a cannon ball to any given distance; he exerts great *power*, and the man is considered as the moving principle, the *cause* of the motion of the ball. But from whence does *he* derive this power?—There is nothing in bone and muscle to propel a ball any more than in a stick or stone; all are wholly inert, until some moving principle is applied. A mass of flesh exerts no power; nor does spirit apply at all, to material matter. Whence then comes this moving principle? It is not inherent in flesh and blood, nor is it the consequence of spiritual agency, for beasts, which have no spirits, exert the same power. What then is *animal power?* Here we are lost in the infinitude of Omnipotence, and are left to admire and adore that wisdom and goodness which has invested us with such mysterious and wonderful qualities. All we are permitted to do, is to apply this principle in all the various circumstances of our existence, and to investigate its effects, when thus applied.

My present object however, is only with the application of this principle to *draught*, and as there are only two kinds of power, animal and mechanical, which are as yet applied to the common purposes of draught, I shall consider only these two, in their various applications.

By *animal power*, as I have before intimated, is simply meant the moving of any given substance, by the exertion of animal strength, such as the drawing of a cart by a horse, or an ox. *Mechanical power*, is the same principle, applied by means of machinery; and usually is the effect of steam.

As much competition has arisen of late, between these two agents, by the introduction of Rail Roads, it might be an interesting inquiry to compare their respective merits, with all their attendant advantages and disadvantages; but I have neither time nor inclination for so great a task. Still it may be well, to state a few circumstances, connected with their respective operations. And before doing this, I will explain what is meant by the "force of traction," a term, which is constantly used in speaking on this subject; and for this purpose, I will avail myself of an extract from a foreign work.

"A force is most conveniently measured by the weight which it would be capable of raising; but it is not therefore necessarily applied vertically in which direction weight or gravity acts.

"If a weight of 100*lbs.* be suspended to a rope, it is clearly exerting upon this rope a force of 100*lbs.;* but if the rope be passed over a pully void of friction, and continued horizontally, or in any other direction, and then attached to some fixed point, the weight still acts upon all parts of this rope, and consequently upon the point to which it is fixed, with a force equal to 100*lbs;* and so inversely, if a horse be pulling at a rope with a force which if the rope were passed over a pully would raise 100*lbs.* the force of traction of the horse is in this case 100*lbs.* Spring steelyards being now commonly in use, we may be permitted to refer to them as affording another exemplification of our meaning. In pulling at a steelyard of this description, whether the force be exerted horizontally or vertically, the index will of course, show the same amount; and consequently, if the strength of the horse be measured by attaching the traces to one of these steelyards, the number of pounds indicated on the dial will be the exact measure of the strain the horse exerts, and the amount of strain is called the "*force of traction.*"—In other words, a man may be able to draw or push, upon a rail way, a carriage weighing 2,000*lbs.*, while at the same time he cannot lift more than 100*lbs.* It will readily be seen, that the latter is the measure of his strength, or *force of traction*, while the former is simply the effect of it.

The force of traction of a horse, has been variously estimated by different authors, from 80*lbs.* to 200*lbs.*; but the ordinary average at a slow pace, is now rated at 125*lbs.*, over and above the power necessary to carry his own body.

The comparative merits of horse and steam power, when applied to the conveyance of property, must depend principally upon their practicability and expense. These two points, are most conveniently tested upon rail ways, where both powers are constantly in use; and of course their practicability proved.

The annual *expense* of a horse, depends upon the interest of purchase money; the decrease of value; the hazard of loss; the value of food; harness, shoeing and farriery; rent of stabling; and expense of attendance. These are estimated in England, by Mr. Tredgold in his work on Rail Roads, at about £60 sterling, or $266 40-100, allowing the horse a power of 125*lbs.*, travelling at the rate of three miles per hour and the day's work at eighteen miles.

The annual expense of a Steam Carriage consists of the interest of first cost; the decrease of value; the hazard of accidents; the value of fuel and water; renewals and repairs; and expense of attendance. These are estimated at £51, or $226, 44-100. This power is equal to a force of traction of 155*lbs.*, for the same number of miles per day as the horse, and after deducting the power necessary to move the engine. Thus it appears that the expense of the horse, is to that of a steam engine, about as 147 to 100; which shows a decided advantage in favor of steam power, when used upon rail ways. If then the power of the horse and steam engine, could always be applied to draught upon rails, we should be at no loss to determine the preferable agent; but unfortunately we are compelled to use roads as we find them; and under such circumstances, horse power presents a different aspect.

In the ordinary use of horse power upon common roads, the force of traction of the horse, and expense of keeping, will remain much the same as above stated, while those of the steam carriage, for the same purpose, must undergo considerable change. The carriage must be heavier and stronger, and of course the cost more; the expense of fuel more, and wear and tear greater, because more power will be required to overcome the varied resistance. Under these circumstances the proportionate expense of horse and steam power is estimated to be about as 115 to 100.

If this estimate is correct, there can be no great advantage arising from the use of steam power, even when the roads are good and approximate towards the smoothness of rails, unless where velocity is required at the expense of power. Ordinarily, it will be found that the horse will adapt himself so perfectly to his work, increasing or

diminishing his power, as occasion or resistance may require, that the *average effect* of his power will be increased, rather than diminished, thereby enhancing his average force of traction. On common roads, great obstructions are often presented, and constant changes of ascent and descent occur, and it is on such occasions, that horse power is decidedly advantageous.

On the contrary, a steam engine of a given power cannot increase or diminish its force to meet every little variation in the road, and it must consequently come to a dead stand, when any resistance occurs beyond its force of traction. "For instance, suppose the carriage to be advancing steadily under the effect of a force of traction of 500*lbs.*, and that a stone or rut suddenly causes a resistance, which it would require 600 or 800*lbs.* to overcome; if the impetus or momentum of the mass, be not sufficient to carry it over this obstruction, the machine must stop until some increased power be given to it."

These objections to mechanical power are however, not insurmountable, but they present such serious difficulties in practice, that some farther discoveries must be made, and some greater inducements offered, before it can come into general use.

Under such circumstances, connected with the numerous other contingencies, which seriously effect the practical application of this power, we shall readily be induced to abide by our old friend the horse, and make his burthen easy, and his labor as effective as possible. QUERCUS.

ON THE MANNER AND TIME FOR SOWING CLOVER SEED.

[From the Farmers' Register.]

In consequence of my reading an ingenious article in the first volume of the Register, (page 566) on sowing clover seed, I was induced last spring to try one of the experiments therein recommended. Three beds extending quite through a large field were *harrowed* previously to their being sown. Two of them were rolled after the seed had been applied—the third not. Between these beds I observed no difference. I cannot therefore say whether or no the rolling would generally be of any use. Perhaps it may have been owing to the subsequent state of the weather that no difference was perceptible. Theoretically, I should certainly prefer rolling, for the sake both of the wheat and the clover. Between the three beds, however, and the land on each side, there was a striking and gratifying difference during the whole year. They could be traced after harvest, with the eye, at the distance of several hundred yards, by their superior verdure and luxuriance, throughout their whole extent. A nearer inspection showed that they were much more thickly set than the neighboring beds, on which the same quantity of seed had been put. The success of the experiment is as complete as can be inferred from a single trial: to me it is conclusive. I think an important consequence may be deduced from this plan that did not occur to its author—I mean the estimated saving of one-fourth of the usual quantity of seed, with greater certainty of success, and regularity of distribution, than in the common way with the more liberal allowance. It needs but little reflection to form some idea of the immense advantage that would thus result to an extensive region, for which nearly the whole supply of this article has to be purchased from a distance. The ordinary mode of sowing clover seed on a hard surface, and then leaving it uncovered to take its chance, is liable to many objections. Much seed is lost: it is irregularly distributed—the plants frequently growing in bunches, and not unfrequently failing altogether. But little land is so neatly prepared as not to have numerous inequalities. The seed is liable to roll, or be washed into the small cavities or depressions, while the eminences are either not at all, or only scantily supplied; and the few seeds that may remain and vegetate in those situations, are exposed to injury from drought or frost, or both. By previously harrowing, the seed sticks where it is deposited; and even if not rolled, it soon gets covered by the settling of the loose earth, from rain and other causes.

I have taken some pains to learn the opinions and practice of intelligent farmers in regard to the management of clover seed. The result of these inquiries, briefly stated, may not be amiss. One gentleman, as remarkable for agricultural, as was a certain scourge of the Philistines of old for physical strength, prefers sowing in January: another, whose conclusions are not often wrong, the early part of February, which he considers so far preferable even to the latter part of the same month as to justify one's paying, if neccessary, double price for the seed: he mixes the requisite quantity of seed for each acre, with one bushel of damp saw dust; and plasters in the month of April, when the plants are well up. A third gentleman, who is very observant, and keeps an accurate diary, sows the clean seed from boxes, with small holes in different places to regulate the quantity, during a *cold* spell in February, or if it does not come in February, in March, (for he says it always will happen in one month or the other) and never applies the plaster till the second spring, in order to avoid the rust in his wheat, to which malady he thinks it is rendered more liable by the use of that mysterious mineral. The method of a fourth gentleman is to mix three bushels of plaster with one of seed, and to sow at first half the quantity intended to be applied, going over the whole ground, then returning to the place of commencement and sowing the residue, so that the ground is twice sown over to insure greater regularity, and at two different periods, to afford a better opportunity of escaping destruction by frost; the full quantity of gypsum is afterwards applied when the clover plants get in the third leaf. The opinion of the writer of this article is in favor of sowing from the 25th of January till the 20th of February, taking all circumstances and seasons into consideration. By harrowing the land, and still better, I presume, by rolling also, clover may doubtless be sown with perfect safety, considerably earlier and later than the period above specified. It may be useful here to state that some sensible and successful farmers consider a bushel of plaster and ashes mixed in equal quantities, as beneficial as a like measure of the former article alone, and of course, much cheaper, especially in the interior, where to the first cost of the commodity is to be added the cost of carriage.

A PLANTER OF THE LOWER JAMES.

January, 1835.

[From the Genesee Farmer.]

WILLOWS AND GRAPE VINES FOR HEDGES.

Mr. L. Tucker:—Although I have not been a strenuous advocate for hedges as fence, believing they were generally harbors for weeds, and took too much ground, yet there are circumstances which render them very proper. Many years ago a friend of mine had about ten acres of swamp land, so miry that he could not make a good fence; on this swamp he planted a double row of yellow willow cuttings nine inches apart, making the rows break joints—these, in about three years, had grown from twelve to sixteen feet high—they were then lopped about six feet from the ground and the tops brought down. After this a row of blue grape vine cuttings was planted one every three feet, along the willows—these in a few years climbed the trees, and have yielded a pentiful crop of grape juice, which has been sold to the distilleries, and furnished a good income; so that the proprietor has not only a good fence but a fruitful one. This land was divided by small narrow ditches, nine inches wide and six deep, every four rods—then between these ditches, when the ground was frozen, he carted on a quantity of pit sand, by which means the water was thrown each way to these narrow ditches, and the land sown with red top grass, and has for more than twenty years yielded a plentiful crop of hay annually. This land, since my remembrance, was considered worthless, but now yields an income of more than two hundred dollars per annum.

R. M. WILLIAMS.

Potter, Nov. 29, 1834.

PERENNIAL RYE GRASS.—Last spring I procured a small quantity of the seed of the Perennial Rye Grass, and sowed them in my garden. My object was to ascertain whether it was adapted to our climate; and how far from the smallness of the experiment, it might prove an acquisition in our rural management. The seed came up well, but during the heat and drought of summer, some of the plants perished. The grass made but an indifferent appearance, until the rains commenced in the fall; after which it put forth rapidly, and has exhibited a most luxuriant growth ever since. Even at this time, though the thermometer has been as low as ten degrees, and the season generally quite cold, the blades are perfectly green, not showing the slightest appearance of having been nipped by the frost. It is decidedly the most beautiful grass I have ever seen, except perhaps the English grass or greensward, which it closely resembles in the length and glossiness of its spears. The bunches are large and the blades very long. Encouraged by the flattering result of this trial, I have purchased a few bushels for the purpose of sowing a lot; and I think I may confidently recommend others to do the same. There can be no doubt of its being well adapted to the soil and climate of New York, judging from the hardness with which it resists the cold. The quanty of herbage afforded by the Rye grass, appears so far, to exceed considerably that of Orchard grass, Timothy, or the tall oat grass [*Avena elatior*], all of which, but particularly the last, I have cultivated to some extent. T. S. P.

Beaverdom, Va. 1 mo. 1st. Gen. Far.

THE BREEDER & MANAGER.

[From the London Lancet.]

LECTURES ON VETERINARY MEDICINE,
Delivered in the University of London by Mr. Youatt—Lecture XI—CONCLUDED.

Diseases resembling Farcy.—Sprain.—There are some diseases that bear more or less resemblance to farcy, and from which it is necessary that you should be able readily to distinguish it. You would hardly confound it with inflammation from sprain. This is too circumscribed, too plainly connected with the joint or the tendon,—the heat and the tenderness referable principally to some particular spot.

Grease and Swelled Legs.—It resembles more the enlargement of the limb from grease, or from inflammation of the cellular texture of the leg.—You will generally find some connexion with grease more or less apparent or occult—some crack or scurfiness,—or if not, there is a peculiar tenseness and redness and glossiness of the skin, and ichorous discharges, and most peculiar catching up of the leg, so that sometimes the animal throws himself fairly off his balance, and falls upon, and sadly injures and bruises the incautious attendant. This swelling may be very sudden,—it may reach to the hock, and even to the thigh, but it is usually to be traced to its origin; and it is most intense about the neighbourhood of the fetlock.

The swelling of farcy is yet more sudden. The horse is well to-day, to-morrow he is gorged from the fetlock to the sacrum; and although there are not the same redness and glossiness, there is exquisite tenderness; the horse cannot be touched, and there is burning heat in the limb, and much general fever. It is simultaneous inflammation of all the absorbents of the limb.

However, when I see the sudden swelling from grease which I have described, I am a little suspicious of that which may be mingling with grease, or for which grease may prepare the way, and you will have many cases in which these sudden swellings attributed to grease, and evidently connected with it, terminate in farcy.

Surfeit.—There is a pustular eruption named surfeit; I hardly knew why, until the erudite Mr. John Hinds enlightened the darkness of my understanding, by telling me that "it is connected with *mange*, and that both terms are of French origin; *sur-fait* or overdone being tantamount to *mange*, from *manger*, to eat, in its imperfect tenses,—the effect of eating too much, which has brought on the disease." Well, this surfeit consists of a pustular eruption,—surfeit-bumps, as they are called,—but terminating in desquamation, not in ulceration; and although numerous, yet irregularly placed, never following the course of the absorbents, but scattered all over the skin.

Anasarca.—You will distinguish it likewise from anasarca,—local dropsy of the cellular membrane,—and particularly from that enlargement beneath the thorax which has the strange appellation of water-farcy, but having no character whatever of farcy, and by this false title leading to many a blunder, and to mischief. Anasarca is debility; not inflammation of the absorbents. It is an indication of general debility to a greater or less extent, and, properly treated, soon disappears, except that occasionally at the close of some very serious disease it indicates the breaking up of the constitution.

Farcy Contagious.—Of the contagiousness of farcy there can be no doubt, but it does not commence until ulceration has taken place. The matter of farcy alone is the medium of communicating the disease. It does not, however, appear to be so contagious as glanders. A farcied horse does not by far so often infect his companions as does the glandered one. Still it is right to be on our guard, and to take every possible precaution. The mode of infection is probably the same, namely, the virus being brought into contact with some wounded or abraded surface.

Curative treatment.—Why Farcy admits of cure.—Of the curative treatment I am happy that I have far more to say than I had of glanders.—This may seem strange. Glanders, a simply local complaint, bids defiance to all our means and appliances; yet when the virus has spread through the frame, and affected the greater part or the whole of the absorbent system, it is occasionally manageable. Why, Gentlemen, it is the very fact of its spreading that enables us to account for this. When it is simply local, all its virulence is concentrated on one small surface, and no medicine can be brought to bear with sufficient power on that plague spot; but, when it begins to spread, and before the tissues which it now involves are too much injured and disorganised by its poison, its intensity is diminished. As inflammation of almost every character becomes diffused it less powerfully affects the individual portions over which it spreads; it is diluted—lowered; and now as it becomes in some degree constitutional, it may be attacked with greater hope of success.—We have many medicaments which will exert a considerable general influence, but we have none that have a sufficient local determination and power. We can now find a counter-irritant, a stimulus, a tonic as diffusible and as energetic as the poison.

But, whatever, Gentlemen, may be thought of this, however it may wear the appearance of mere hypothesis, the fact is undoubted, that while glanders has baffled every practitioner in every age, farcy is, occasionally at least, under his control. Let it be remembered, notwithstanding, that even here power is cribbed, confined, and it is only for one short and fortunate moment that we are enabled to exert it with the slightest effect. The virus may be diffused, but it has not produced all its deleterious influence; the new tissue is diseased, but it is not yet disorganised; the seed is sown, but it has not yet taken root; confirmed farcy is quite as untractable as the worst form of glanders.

The local treatment of Farcy.—Our treatment of farcy will be both local and constitutional. We can here fairly get at the seat of disease, at least while the superficial absorbents alone are concerned. The budding iron, applied with sufficient severity on every knot or ulcer, will destroy the diseased surface, and the virus that lies upon it.—A crucial incision should be first made through the integument, and then the iron will be brought perfectly in contact with the whole of the part.—When the disease has proceeded somewhat further than this, and ulcerations, and these threatening to be extensive, have appeared, the case should not be abandoned without a struggle. First in the list, and the most efficacious of all, stands the chloride, of lime. By it the progress of decomposition will be partially or entirely arrested, or, rather, it is another substance which will be decomposed and destroyed—the virus which was so actively employed. The fœtor removed, and the virus in some measure destroyed, the ulcers should be frequently washed with some stimulating lotion. I know none better than the diluted nitric acid, in the proportion of one part of the acid to eight of water. This may be often and freely applied,and occasionally doubled in strength if the appearance of the wounds is not satisfactory—resorting again to the chloride of lime, if any sanious discharge or fœtor should return. Mr. Turner recommends a strong solution of the sulphate of iron in these cases, plentifully applied over the ulcers, and well rubbed into the sound part.

The Constitutional treatment.—Farcy, however, can scarcely be considered as a mere local disease. It occupies so large a surface, and threatens, to involve and speedily involves, so much more, that we eagerly inquire for some auxiliary which shall affect the constitution generally.—Have we that which will support the frame against the ravages of the disease, or which will excite a different, and as powerful, action over the various tissues? Tonics are plainly indicated. Practitioners have again and again gone through the whole list of them, vegetable and mineral, and too often without the desired effect; almost invariably so, when considerable disorganisation has taken place, and, I fear, in the majority of cases, when the disease is attacked in an earlier stage. That which I have found to be most useful, and on which I believe practitioners generally place the greatest dependence, is the bi-chloride of mercury (corrosive sublimate), in doses of from five grains to a scruple, morning and night, first dissolved in alcohol, and given in a pint of gruel. It is extraordinary how long this medicine may sometimes be given without affecting either the bowels or the salivary glands. It must, however, be carefully watched, and given in diminished doses, or omitted altogether, when ptyalism is produced. Mr. Turner adheres here, as in glanders, to the sulphate of iron, given in solution, as the ordinary drink of the horse. As for arsenic, subacetate of copper, sulphate of copper, I must acknowledge that I have rarely seen any good effect produced, and the vegetable tonics are not here sufficiently energetic. The effect must be rapidly produced, and must be intense. Mashes, green meat, carrots, are excellent auxiliaries—they are, in fact, indispensable. Mr. Blaine tells us that a horse so reduced by farcy as not to be able to stand, was drawn on a hurdle into a field of tares, and left there to take his chance. When he had eaten all within his reach, he continued to scramble a little further in search of more, and at length got up and ultimately recovered.

Cool and pure air necessary.—I would here impress it upon you, as I did when treating of glanders, that as farcy is the result of our improper stable management, the very foundation of our method of cure must be a return almost to a

state of nature. Cool and pure air, and plenty of green meal, and, especially, if it can be got at, a salt marsh, must be our chief restoratives, or at least they must never be forgotten as indispensable auxiliaries in all our medical treatment.

The apparent cure often deceitful.—Gentlemen, I have gone as far as I dared with regard to the curative treatment of farcy; but as the days of sanguine and often disappointed, expectation are with me nearly gone by, and cold calculation and observance of actual result have succeeded, I feel myself bound to add, that in the majority, the decided majority, of the cases of supposed cure of glanders, the animal was only *patched up.* Six or twelve months scarcely pass on ere we have grease, swelled legs, sudden lameness, cough, phthisis, glanders, or farcy again. Therefore do not always think that you have performed wonders when the poor emaciated farcied horse, comes up plump and fat, every ulcer healed, and he apparently equal to any kind of work. Hope for the best; but do not inconsiderately give a prognosis which may not a little compromise your professional reputation, and prove of serious injury to your employer.

Sure predisposition to take on again the disease.—Be assured that horses that have once laboured under an attack of farcy, however perfectly they may seem to have been cured, are always in jeopardy. The foe is beaten, he is driven to some unsuspected lurking retreat, but he is not destroyed. He is slowly acquiring new strength, and will probably burst from his ambush when you least expect it. I may not perhaps be justified in positively affirming that the virus is still existing, but long experience forces on me the mortifying fact, that there is at least a predisposition, and a strong one too, again to take on the disease. The tone and strength of the constitution were too effectually undermined to be ever again essentially and substantially repaired. Catarrh will run on to glanders; grease will precede farcy; nay, the commonest operation can scarcely be hazarded. Professor Peall says, that a horse that had been severely affected with farcy was cured, and remained perfectly sound for more than a year. At this period he was castrated and appeared to be going on remarkably well; but on the eighth day he broke out with the button farcy over the greater part of the surface, and which proved to be a breaking up of the constitution, and he died. Do not you be discouraged by this. Do not abandon the farcied horse to his fate. You are able to do much: you will sometimes effect a perfect cure.—But be prepared for the worst. Guard your prognosis, and guard the seemingly recovered animal from the exciting cause of this and every other disease.

Conclusion, caution, and encouragement.—And, now, Gentlemen, I am not sorry that I have done with these misunderstood, mysterious, untractable, and treacherous diseases. The hints which I have dropped may at least be useful in giving you a more perfect conception of the diagnostic symptoms of these maladies and their insidious character; and more particularly in putting you on your guard against that which your experience in country practice, and the testimony of every intelligent farmer, and every proprietor of horses on an extensive scale, will point out to you as the most prevalent cause of it—CONTAGION.

As for the medical treatment of these diseases, I again repeat, while you are honest to your employers be not discouraged. Nature has an antidote for every poison. The antidote for these will ultimately be known. Here is work for your ingenuity. Do not quite forget the indications of cure which I have traced out, and remember that he who does discover a remedy for glanders, as well as for rabies, will deserve well of his profession and his country.

THE GARDENER.

[From the Floricultural Cabinet.]

THE DAHLIA.

BY J. MANTELL, F. L. S.

The Dahlia is a native of Mexico, and was first introduced in England in the year 1789, at which period it attracted but little notice, and the species was soon lost. Although this flower was re-introduced by Lady Holland, in 1804, it is only within the last few years that the attention of the florist has been directed to its cultivation and improvement. It is now admitted to be the chief ornament of the flower-garden during the autumnal months, and, independently of the great variety and splendor of its flowers, it is valuable to the florist as filling up a void at that season of the year in which but few other plants are in blossom.

It has been computed that not less than twenty thousand seedling Dahlias are raised annually in this country. The facility with which they may be raised—the comparatively short period which intervenes between the time of sowing and that of flowering—and the great success which has hitherto attended this mode of propagation, will, no doubt, account for the extensive cultivation of this highly esteemed flower.

The Dahlia is propagated by cuttings and by divisions of the root, and new and beautiful varieties are constantly raised from seed. The seed is usually obtained from the finest double flowers, but some successful propagators prefer that procured from semi-double varieties, and we believe that some of our finest Dahlias have been raised from semi-double seedlings. The seed should be collected early in the season, as soon as the blossoms have withered and the receptacles are sufficiently dry; and if the seeds be allowed to remain in the calices, they will retain their vitality better than if detached from the receptacles.

The seed should be sown in large pans or pots, about the middle of February, and placed in a hot-bed frame. The young pots require to be potted off singly into the smallest-sized pots, soon after the cotyledons are above ground, and when the first pair of leaves are sufficiently developed.—They should then be placed in the frame, nearly close to the glass, to prevent them from being drawn up weakly. When of sufficient size, they may be re-potted, placed in a cold frame, and protected at night, till the middle of May, that being the period of planting them in the open air.

Those who propagate extensively, sow the seed in hot-bed frames the beginning of March, and during the month of April, instead of potting, set out the young plants on a slight hot-bed, covering them at night with mats. With the view of obtaining new varieties, some propagators transfer the pollen from one flower to another, by means of a small camel-hair pencil, in which case the flower intended to receive the pollen should be covered with a fine gauze bag, a day or two before the florets expand, and the covering should be continued a few days after the operation is performed.—This method is seldom practised, unless for the sake of experiment, as the ordinary mode is found very successful in producing fine double flowers.

Cuttings may be made in March. The old roots should be placed in a hot-house, or in a hot-bed, and the tubers should be covered with mould, sand, or finely-sifted tanners' bark, leaving only the crown exposed. They will soon put forth shoots; these should be carefully detached when about two or three inches in length, and planted singly in small pots filled with a compost of equal parts of well-decomposed leaf-mould, frame manure, and fine sand, to which should be added a sufficient quantity of finely-sifted garden mould. After the cuttings are inserted, they should be put into a hot-bed, carefully shaded from the sun, and protected at night by mats. If, in applying the linings, steam should arise, the plants will be liable to damp off, unless the lights be sufficiently raised to allow the rank steam to escape. In about a fortnight or three weeks the young plants may be removed to a cold frame, and gradually inured to the open air.

Where extensive propagation is required from new and choice varieties, the roots are usually placed in a hot-bed, and every shoot taken off when about two or three inches high, care being taken not to injure the buds which surround the base of the shoot, for if these are injured or broken off, fresh buds will not be developed from that portion of the crown.

Where only a limited supply of strong and vigorous plants is required, we have recently discovered that the finest plants are produced by detaching the young shoots, when about two or three inches high, so as to include the cluster of buds surrounding the base of each shoot. Some care is necessary in this process; the shoot should be held near its base by the finger and thumb, and by a slight motion of the hand it may easily be detached. If the operation be adroitly performed, the base of the shoot will present a convex appearance, surrounded by a number of incipient buds, and a corresponding concavity will be found in the crown of the plant from which the shoot has been extracted. Plants raised by this mode not only produce the finest flowers, but the crowns invariably break the following spring, which is not *always* the case with plants raised from cuttings in the ordinary manner: it has been asserted that the cause of the failure has, in many instances, arisen from the removal of the incipient buds at the base of the leaves of that portion of the cutting which is usually inserted in the ground.

There can be no doubt, however, if the buds be removed, the cutting will readily strike root, producing luxuraint foliage and a profusion of flowers. But although the tubers are numerous and fully formed, it will, on inspection, be found that they are merely attached to a hollow stem,

and, consequently, the crown being absent, no buds can possibly be developed by any subsequent treatment. It is therefore important, if the perpetuation of the plant be required, that the buds be not removed. Some propagators, indeed, on receiving new plants, examine the roots, and unless a portion of the crown be attached, they cut off the shoot close to the surface, treating it as a cutting, in the ordinary manner.

The plants, whether raised from seeds or from roots, may be planted out into the open borders from the middle of May till the beginning of June. They are usually planted from three to four feet apart; but if planted from four to five feet apart, they will not attain so great a height, and if trained to a single stem, will in general produce much finer flowers. The borders should be well manured every spring before planting, and at the same time about an equal part of good fresh soil should be added. The Dahlia will succeed in almost any soil, though a light sandy loam produces the finest plants: the variegated and striped varieties exhibit their colors more distinctly when planted in a peaty soil. The plan of training Dahlias to a trellis appears a good method of securing them, for when tied up to stakes the wind frequently twists the plants and destroys their tops, but the former mode secures them against all winds, and exhibits the flowers to the greatest advantage: three or four stakes placed angularly round the plant, and the stems tied to them, will also answer the purpose.

To procure fine flowers for floral exhibition some cultivators train the plants to a single stem, removing all superfluous side shoots, as well as flower-buds, leaving only one or two flowers to expand. The soil should be kept constantly moistened, and when the plants come into blossom manure water should be liberally supplied. It has been asserted that some of the spotted varieties succeed best in a poor soil destitute of manure, and that success may generally be insured by removing the self-colored blossoms as they appear. The luxuriant growth of plants may be greatly retarded by treading the earth firmly round the roots. When the soil is of a loose open texture, evaporation should be checked by mulching the plants, and if the soil be covered with moss the moisture will be more effectually retained, and it will give the borders a neater appearance.

When the blooming season is near its close, about four inches thick of decomposed bark, or of leaf soil, should be laid over the roots, extending two feet round the stem of each plant, to prevent the crown being injured by sharp and sudden frosts.

The tubers should be taken up on a dry windy day and the soil carefully shaken off, so as not to twist the roots. Having been removed to an airy situation in a shed, they should be placed singly over the floor, till the soil remaining on the tubers be dry, when they should be laid on shelves secure from damp or frost, and be covered with dry sifted tan or gray sand: they will, if so managed, keep perfectly sound till the following spring.

Choice seedlings or small tender tubers may be preserved during winter by placing them in pots of sandy loam, and giving them at the time of potting a slight watering, keeping them afterwards in a dry situation.

Criteria of a fine double Dahlia. The flower should be erect and stand completely above the foliage, for if the peduncle be short, so that the flower be hid among the leaves, it will not be displayed to advantage.

Form, color, and size are considered the essential properties of a fine Dahlia.

1. *Form.*—All good judges allow that perfection in form consists in the near approach to a hemisphere. The Springfield Rival may be given as an instance of the nearest approximation to a perfect flower: it is, however, too flat in the centre, and the outward petals are reflected. It is essential that the outline should form a true circle, and consequently the petals should be regularly disposed, rounded, smooth at the edges or rose-leaved, and slightly concave, but not so much so as to let the back of the petals be seen in the front of the flower. Those flowers whose petals are narrow, pointed, notched, or fimbriated, as well as those that are flat or convex, however desirable for the flower border, are objectionable as show flowers, as are also those which when fully blown exhibit the eye or disk. In some Dahlias the petals near the centre converge, and conceal the disk, which, when the florets are fully expanded, become exposed; these are, therefore, pronounced by florists imperfect flowers.

If the hemispherical form be assumed as the point of perfection in the Dahlia, those flowers would be preferred that rather exceed than fall short of this standard. The Countess of Liverpool has been adduced as an illustration of the former, and Lady Grenville of the latter, and the mean between these two examples constitutes an excellent criterion whereby to judge of perfection in the form of the Dahlia.

2. *Color.*—As it regards color, much must depend upon taste, but selfs, of whatever color they may be, should be bright and distinct. In striped, spotted, tipped, or variegated varieties, the colors should be well-defined and every petal uniformly and distinctly marked. Those that are pounced, blotched, variously or irregularly marked, are inadmissible as show flowers.

3. *Size.*—When other properties are equal, size will determine the preference; but in judging of a good Dahlia, form must have the pre-eminence, then color, and lastly, size; but in no instance should either form or color be sacrificed to size. The relative proportions of excellence in these criteria have been thus estimated:—form three, color two, size one. Thus a Dahlia, possessing the properties of form and color, would be judged superior to one having color and size, the relative proportions being as five to three. By this standard the comparative merits of this class of show flowers have been estimated by the censors at the exhibition of the Metropolitan Florists' Society.

Seed Corn.—Thomas Foster, of Auburn, writes to the Cultivator, that he has for years selected his seed corn, at harvest time, from stalks producing two ears, preferring the upper ear, and that he has had one eighth more product than from seed saved in the ordinary way.

[From the Genesee Farmer.]

The Tomato.—Few vegetables of equal value are so little known through this country. None are more readily raised—none better repay the cultivator.

The Tomato, or love apple, is a luxury in common use through the south of Europe. In France and Italy, particularly, it is largely employed in culinary preparations. Either raw or stewed—in soups or fricassees—for gravy or catsup—as well as for pickles and sweetmeats—its utility is such, that it would not readily be dispensed with by those who have given it a fair trial in these various ways.

The experience of several years enables me to recommend the Tomato to all who desire the acquisition in their gardens of a cheap luxury.

For salubrity, none can surpass it. It has been constantly used, in various forms, at almost every meal during the last three or four seasons, by myself and several acquaintance, whose health continued excellent even when the prevalence of the cholera banished fruits and vegetables generally from most tables.

Should any who are now unacquainted with the Tomato, make the experiment of raising a supply, they may add to the simple luxuries of the table by adopting these directions for making

Tomato Catsup.

The Tomatoes, when fully ripe, should be bruised and boiled slowly for half an hour—then strained through a cloth, and the liquid boiled for another half hour, after adding salt and spices, but without any admixture of water. The scum should be carefully moved, so as to render the liquor as pure as possible. It should be bottled, and kept in a cool place. After it has stood a short time, should any sediment be discovered in the bottles, (and in order to know with certainty, *clear* glass bottles would be the best for this use,) the liquor should be poured off into other bottles. In this way, catsup of excellent quality—preferable, in my judgment, to that from Mushrooms, and clear as choice Madeira—can be readily made, in greater quantity and with less trouble than in the common way.

[From the Poughkeepsie Telegraph.]

Coal ashes—a manure.—Messrs. Editors.—As I see all those who burn anthracite coal, throw away their ashes in the streets and yards, it puts me in mind of an experiment I made the last season with ashes from hard coal, which, as it may lead to some good results, I will mention. Last winter I saved my siftings from one coal fire, and in the spring in planting potatoes in my garden, I put a spade full of the ashes in every hill, and I had a fine yield of potatoes; much better than was common for the season. Whether the coal ashes were serviceable or not, I cannot positively say, but I think they were, for finer potatoes I did not see any where—I had like to have said not as fine. I shall try these ashes again the coming season, and pen these remarks in the hope that they may be of service, by inducing some horticulturists also to experiment with them. It is but little trouble, and there may be virtue in them.

Poughkeepsie, Jan. 15, 1835. C.

[From the Horticultural Register.]

GARDENER'S WORK FOR FEBRUARY.

Manure may now, if the weather and the temperature will permit, be carried and laid in the garden, but should not be spread till later in the season. Provide, if you have not already, bean poles and pea rods, which you will place under cover, if practicable, till wanted. Dwarf peas will generally need rods about three feet. The middle sized those of about six or eight feet, and such as Knight's Tall Marrow, nine or ten feet. The same sort of rods which the tall growing peas will require will answer for most kinds of pole beans. The Lima beans will need strong poles, eight or nine feet high. Where the absence of snow will permit, you may rake together and burn, or deposit in a compost bed, the haulm, straw, stalks, vines or other remnants of last year's crop. Prepare frames and straw mats for hot beds, trellises for espalier trees, &c. Repair garden tools, and procure new ones if necessary. It is, or soon will be time to prepare hot beds. Writers have given long and somewhat tedious directions relative to this process, but the following we believe is sufficiently particular for most purposes.

Mark out your bed about six inches larger on all sides than the size of the frame with which you mean to cover it. This frame is usually about six feet in length and three in breadth, and is covered with glass set in sashes, twelve panes, seven by nine. The sashes are hung by hinges on the back side, so that they may be raised up or let down in front at pleasure. The frame or box is light on all sides, and generally about twelve inches high in front and eighteen inches high on the back side.

Mark off the bed to the size before mentioned, dig it, and cover it with litter from a horse-stable. Then, by several layers of horse manure laid on with a fork, raise the bed as high as you wish. This bed being formed, and having stood two or three days with the frame and lights placed over it to protect it from rain, it is next covered with from six to twelve inches of rich earth. In severe weather the sides of the bed are often protected by bundles of straw, or faggots, which prevent the escape of the heat. If the fermentation is too powerful, and the heat too great, give it air by raising the lights in your frame until you have obtained the right temperature. This should be from about 65° to 75°, Fah.; not higher than the last mentioned in the day time, nor lower than the first at night. It is said that experienced gardeners can judge of the proper temperature of a hot bed by placing a hand upon, or within it.

MELONS.—A French periodical gives the following method of hastening the ripening of melons:—Spread on the melon and round it a thick couch of from one to two inches of pounded charcoal. Lampadius tried this plan at Friebuler in 1813, and succeeded in making melons ripen in a box of earth in the open air, during the summer of that year, in the mining district of Saxony.—The surface of the earth thus covered with charcoal had at noonday a temperature of 37. 50 to 47. 50 of Reaumer, while at the same time the thermometer in the shade was only at from 15 to 20, and in the sun at 25 to 27. 50.

MISCELLANEOUS.

[From the Boston Medical and Surgical Journal.]

CHRONIC RHEUMATISM.—We are not ready to add to the number of the remedies which have been prescribed for this painful disease, without a certainty that such addition will be valuable in practice. This certainty we are convinced will attend the remedy it is the object of this article to bring before the profession. It is a mixture of equal parts of the balsam of sulphur and spirit of turpentine. Six drops of this mixture may be given morning and evening, and the dose increased two drops a day until it produces stranguary, when the dose should be diminished a little and continued until the disease is removed. We have been recently informed of the good effects of this mixture in a great number of instances, and one very remarkable case has fallen within our notice, in which the disease in its worst form vanished before it in a few weeks, although the patient had been long using without advantage, the usual and other most powerful remedies for this troublesome and painful malady.

OCCUPATION.—The cure for maladies like yours, is employment. "Be not solitary; be not idle!" Rely upon it, life was not given to us to be spent in dreams, and reveries, but for active, useful exertion, exertion that turns to some account to ourselves, or to others; not laborious idleness. (I say nothing of religion, which is between the heart and its Creator.) This preaching, I know, is foolish enough; but let it pass.—We have all two educations; one we have given us—the other we have ourselves; and, after a certain time of life, when the character has taken its ply, it is idle to attempt to change it.
—*Randolph's Letters.*

To Preserve Meat in Snow.—Meat that is killed in December, or January, may be kept in perfection if buried in snow until spring. This is an excellent method of preserving fresh and good the carcases of turkies and other fowls.

Set any open cask in a cold place, put snow and pieces of meat alternately: let not the pieces touch each other, nor the sides of the cask. The meat will neither freeze, grow dry, nor be discolored; but be as good in all respects at the last of March as when it was first put in. The surfaces of the pieces should be a little frozen, before they are put into the snow, that the juice of the meat may not dissolve the snow. The cask should be placed in the coldest part of the house, or in an outhouse.

Cheap Fodder.—Having been informed of the advantages of using the tops of Indian corn, cut as rye straw, to be mixed with potatoes or meal, as a food for horses or cattle, I have been making the experiment during the present winter. I find that my cattle thrive better on the fodder, than on rye straw, (*cut and used in the same manner.*) The corn stalk certainly contains a great quantity of farine substance, and must be highly nutritive. Being cut and scalded with a small quantity of bran, they afford an excellent mess for milch cows. In the common way of fodder-ing cattle with tops, the blades are greedily eaten, but stalks are wasted. By adopting the plan recommended, the whole affords a nutritive food.—*American Farmer.*

[From Poulson's Daily Advertiser.]

THE TETTER.

Mr. Editor—I have been troubled with this complaint on my hands for perhaps thirty years. I have used remedies prescribed by eminent physicians both in this country and in Europe, and have used perhaps twenty applications recommended in the newspapers, or otherwise, but all without permanent effect. In one instance I went as far as to cauterize the skin, but soon after the new skin had hardened, the tetter reappeared. After a violent attack of yellow fever in the West Indies, all the skin of my body pealed off—I was then in hopes this would be an effectual cure, but no such thing, like Monsieur Tonson, the tetter come again.

I had given up all hopes of ever effecting a cure, when I noticed, some six or eight months ago, in your, or some other paper, that Indian dye, or blood root, steeped in strong vinegar, would effect a cure. The remedy being so simple, I resolved upon trying it, and found it effectual; but the blood root leaving an unpleasant stain upon the hand, I too soon relaxed in the application, and the tetter began to reappear: this brought me to the notion to apply vinegar simply, and have found it to answer equally well! I have had no tetter on my hands for months past—when the least speck appears, I touch it with vinegar, and it is gone.

From this experience, I recommend therefore, as a cure for the tetter, "*strong vinegar*, and perseverance in application." With a view that fellow sufferers by this annoying complaint may be benefitted, I hope you will publish the above in your paper.

Respectfully, L. K.

On a method of preventing the attack of Caterpillars.—At the season of the year, says Mr. Brown, of Pinefield, when caterpillars generally attack fruit trees and bushes, the following method of preventing their attacks may not prove undeserving of notice. Let a hole be bored in the stem of a tree, as far in as the heart, in a direction sloping downwards, about a foot from the ground. Into this hole pour a little mercury. Close up the hole with a peg, not very tightly fitted in. Cut the top of the peg smooth with the bark of the tree or bush, and then put a little tar over it to prevent water getting in the hole. This I have found a safe and sure method of not only preventing attacks of caterpillars, but of driving them off the tree; and it is not yet, I believe, publicly known.—*Quarterly Journal of Agriculture.*

CONTENTS OF THIS NUMBER.

Letter from Arkansas Territory—Number of horses and cattle in Ohio—On draught—On the manner and time for sowing clover seed—Willows and grape vines for hedges—Perennial rye grass—Dr. Youatt's lecture on glanders—The dahlia—Seed corn—The tomato—Coal ashes, a manure—Gardener's work for February—Melons—Chronic rheumatism—Occupation—To preserve meat in snow—Cheap fodder—Cure for the tetter—To prevent the attack of the caterpillar.

BALTIMORE PRODUCE MARKET.

☞ *These Prices are carefully corrected every* MONDAY.

	PER.	FROM	TO
BEANS, white field,	bushel.	2 00	2 50
CATTLE, on the hoof,	100lbs.	4 75	5 75
Slaughtered,	"	3 00	4 00
CORN, yellow,	bushel.	63	64
White,	"	62	——
COTTON, Virginia,	pound.	12	17½
North Carolina,	"	14	16
Upland,	"	16	18½
FEATHERS,	pound.	35	37
FLAXSEED,	bushel.	1 62	1 75
FLOUR—Best white wheat family,	barrel.	6 00	6 50
Do. do. baker's	"	5 50	6 00
Do. do. Superfine,	"	4 75	5 00
Super Howard street,	"	4 62	4 75
" " wagon price,	"	4 50	——
City Mills, extra,	"	4 87	5 00
Do.	"	4 70	——
Susquehanna,	"	——	——
Rye,	"	——	——
GRASS SEEDS, red Clover,	bushel.	5 00	5 50
Timothy (herds of the north)	"	2 50	3 50
Orchard,	"	3 00	——
Tall meadow Oat,	"	2 00	2 50
Herds, or red top,	"	1 25	——
HAY, in bulk,	ton.	16 00	——
HEMP, country, dew rotted,	pound.	6	7
" water rotted,	"	7	8
HOGS, on the hoof,	100lb.	5 00	——
Slaughtered,	"	5 50	——
HOPS—first sort,	pound.	15	——
second,	"	13	——
refuse,	"	11	——
LIME,	bushel.	30	33
MUSTARD SEED, Domestic,	"	5 00	6 00
OATS,	"	30	33
PEAS, red eye,	bushel.	——	——
Black eye,	"	87	1 00
Lady,	"	100	——
PLASTER PARIS, in the stone,	ton.	3 00	——
Ground,	barrel.	1 37	——
PALMA CHRISTA BEAN,	bushel.	1 50	1 56
RAGS,	pound.	3	4
RYE,	bushel.	62	65
TOBACCO, crop, common,	100 lbs	4 25	5 00
" brown and red,	"	5 00	7 00
" fine red,	"	7 00	9 00
" wrappery, suitable for segars,	"	6 00	12 00
" yellow and red,	"	8 00	12 00
" yellow,	"	9 00	12 00
" fine yellow,	"	12 00	16 00
Seconds, as in quality,	"	4 00	5 00
" ground leaf,	"	5 00	9 00
Virginia,	"	5 00	10 00
Rappahannock,	"	——	——
Kentucky,	"	6 00	9 00
WHEAT, white,	bushel.	1 05	1 10
Red,	"	1 00	——
WHISKEY, 1st pf. in bbls.	gallon.	28½	29½
" in hhds.	"	28	——
" wagon price,	"	24½	25
WAGON FREIGHTS, to Pittsburgh,	100 lbs	——	1 50
To Wheeling,	"	——	1 75
		washed.	*unwash*
WOOL, Prime & Saxon Fleeces,	pound.	50 *to* 60	24 *to* 26
Full Merino,	"	44 50	22 24
Three fourths Merino,	"	37 44	22 24
One half do.	"	33 37	22 24
Common & one fourth Meri.	"	30 33	20 22
Pulled,	"	31 33	22 24

A FINE BULL.

FOR SALE, a young Bull, ten months old, sired by the thorough bred bull Apollo, (of the Gloster Stock) and out of a very fine cow of seven-eighths Durham S. H. blood, consequently fifteen-six teenths Durham S. H., is for sale a bargain if immediate application be made; he is truly a splendid calf, and will be sold for $100 cash.

Apply to I. I. HITCHCOCK,
jan 13 American Farmer Establishment.

BALTIMORE PROVISION MARKET.

	PER.	FROM.	TO.
APPLES,	barrel.	$3 00	$5 00
BACON, hams, new,	pound.	11	——
Shoulders,	"	8	9
Middlings,	"	——	——
BUTTER, printed, in lbs. & half lbs.	"	25	37
Roll,	"	15	25
CIDER,	barrel.	——	——
CALVES, three to six weeks old	each.	3 00	6 00
COWS, new milch,	"	17 00	30 00
Dry,	"	6 00	10 00
CORN MEAL, for family use,	100lbs.	1 50	——
CHOP RYE,	"	1 50	——
EGGS,	dozen.	19	20
FISH, Shad, salted,	barrel.	5 75	6 00
Herrings, salted, No. 1,	"	4 75	——
Mackerel, No. 1, 2 & 3,	"	5 12	7 00
Cod, salted,	cwt.	2 50	3 00
LAMBS, alive,	each.	1 25	2 00
Slaughtered,	quart'r	31	50
LARD,	pound.	8	9
ONIONS,	bushel.	62	75
POULTRY, Fowls,	dozen.	1 50	2 25
Ducks,	"	——	2 50
POTATOES, Irish,	bushel.	40	62
Sweet,	"	——	——
TURNIPS,	"	37	50
VEAL, fore quarters,	pound.	3½	4
Hind do.	"	6½	——

ADVERTISEMENTS

GOOSEBERRY TREES.

THE subscribers have just received from England, in fine order, 500 Gooseberry, of two and three years growth, raised with single stem, consisting of twenty of the best and largest varieties of the usual assorted colors, regularly named, and as they were obtained from a very respectable nursery, immediately in the neighborhood, where the largest and best Gooseberries are raised, we have no doubt of their being a very superior parcel; price per tree 31¼ cents, or $3 per dozen. Also, by the same vessel, 500 each European Lime or Linden and Larch Trees, 3 to 4 feet high, all which are planted in our Nursery, where we have a large stock of Nursery articles, of which we name the following: Of the Ornamental Trees, Chinese Ailoanihus, or Tree of Heaven, Silver leaved Maple, Sugar Tree, and the European Linden or Lime Trees, all from 8 to 12 feet high, well suited for planting in steets, &c. Of Shrubs, we have the Europran and India Roses Current, Gooseberry and Strawberry, of all the best varieties; also Apple, Pear, Plumb, Peach, Apricot, Nectarine, Quince, English Walnut, and the deservedly celebrated Catawba, and other Grape plants of two years old, by the hundred, dozen or single plant, and as we cultivate the largest proportion of the Catawba, we can dispose of cuttings of that kind low, by the thousand, provided orders are received by trimming time. Thorn Quick Pyrocanthea and Honey Locust, for hedges: Asparagus, Hop and tart Rhubarb roots, Flowering Vines, and an extensive assortment of superb double Dahlias. For prices and other useful particulars, see our Catalogue, to be had gratis at the Nursery, or at the Store, Light street, near Pratt street, Baltimore, where orders will be promptly and carefully attended to. SINCLAIR & MOORE.

Feb. 3, 1835.

SUPERIOR CATTLE FOR SALE,

OF the Devon, and Devon & Short Horn blood, at Brookland Wood Farm, the residence of Richard Caton, ten miles from Baltimore, on the Susquehanna Rail Road, and on the Falls Turnpike Road, consisting of

Devon Bulls, Heifers and Calves, of all ages of each denomination, from 8 months to 4 years—price, forty to one hundred dollars each, according to age and quality.

Devon and Durham Bulls, the offspring of Devon Cows, by the Short Horn Durham Bull Tecumseh. It is supposed by those persons in England who have dairies of this species, that they will be found superior to all others, uniting the beauty of form, hardiness of constitution, propensity to fatten, and richness of milk appertaining to the Devon blood, and product of milk of the Durham—price, forty to one hundred dollars. Apply to

Feb. 3, 1835. THOMAS BEVAN, Manager.

BROOD MARE FOR SALE.

FOR SALE a first rate coal black Brood Mare—terms moderate. Apply to ROBT. SINCLAIR, Jr.
Feb. 10. at Sinclair & Moore's.

BENE SEED.

JUST RECEIVED at this Establishment, and for sale, by the pound or in 12½ cent papers, a small quantity of the seed of this most valuable plant. It is very efficacious in the Bowel Complaints of children, and not difficult to be administered. The seed should be planted in April, in hills like beans, and the leaves will be in perfection in June. Two or three leaves being put into a tumbler of spring water, for 10 or 15 minutes, convert it into a mucilage, which being tasteless, children readily drink.

Feb. 3.

FRUIT TREES—CHEAP.

FOR SALE very low the following Fruit Trees, being part of an invoice missent. There are 58 trees in all, *in perfectly good order*, and they will be sold for $10 Cash.

APPLES.

2 Monstrous Pippin.
2 Royal Pearmain.
2 Long Island Russet.
2 Winter Pearmain.
2 Carthouse.
2 Bellflower.
2 Vandevere.
2 Red sweet Vandevere.
2 Michael Henry Pippin.
1 Winesap.
6 York Greening.
7 Red Streak.

PEACHES.

1 Teton de Venus.
4 Malcaton.
1 Lehman's cling.
2 Gough's Cling.
3 Oblong open Peach.
1 Fine Cling.
2 Early Etna.

CHERRIES.

2 Oxheart
2 York Duke
2 Tartarian
2 Red heart
2 Bleeding do

QUINCES.

1 Portugal.
1 Orange.

I. I. HITCHCOCK.
Feb. 3. Amer. Farmer Establishment.

AMERICAN FARMER ESTABLISHMENT,

No. 16 S. Calvert street, Baltimore, Md.

COMPRISING a Stock and Experimental Farm; a Nursery and Seed and Flower Garden; a Store for the sale of Field and Garden Seeds and Agricultural Implements and Books; a general Agricultural and Horticultural Agency; the Publication Office of the "Farmer & Gardener, and Live Stock Breeder & Manager," and of "Hints to Farmers;" and an Office of APPLICATION for Farmers, Gardeners, Overseers, Managers, &c.

I. IRVINE HITCHCOCK, *Proprietor.*

This establishment is now in full and successful operation, nearly every department, especially that of seeds, being well supplied with articles of the most desirable quality.

Orders by wholesale or retail will be promptly executed on terms that cannot fail to give entire satisfaction to purchasers.

As the limits of an ordinary advertisement preclude the possibility of conveying an adequate idea of the variety and the value to the cultivator and dealer in seeds, of the contents of this establishment, a comprehensive and descriptive PROSPECTUS AND CATALOGUE has been printed and will be sent gratis to any gentleman who will transmit to the proprietor his address (post paid) for that purpose.

BULBOUS ROOTS.

HYACINTHS, Tulips and a general assortment of Bulbous Roots, suitable for the present season, for sale low at this establishment by

Oct. 28. I. I. HITCHCOCK.

THE FARMER & GARDENER;

AND LIVE-STOCK BREEDER & MANAGER.

CONDUCTED BY I. IRVINE HITCHCOCK, AND ISSUED EVERY TUESDAY FROM THE AMERICAN FARMER ESTABLISHMENT, AT $5 PER ANNUM, IN ADVANCE

No. 42. **BALTIMORE, FEBRUARY 17, 1835.** **Vol. I**

☞This publication is the *successor* of the late

AMERICAN FARMER,

(which is discontinued,) and is published at the same office, at five dollars per year, payable in advance.

☞When this is done, 50 cents worth of any kind of seeds on hand will be delivered or sent to the order of the subscriber with his receipt.

American Farmer Establishment.

BALTIMORE: TUESDAY, FEBRUARY 17, 1835.

A CARD.—Those of the subscribers to this paper, who happen to owe any thing on the books of the old American Farmer, are respectfully reminded, that the two concerns are *entirely distinct*, being no longer kept in the same office nor even the same city. The conductor of this paper is not the agent for the settlement of the American Farmer accounts, nor is the agent for the latter, in any manner, authorised to act for this paper. Instances of missending letters to each instead of the other, have recently occurred, which render this notice necessary.

THE PROLIFIC LIMA BEAN.

Linnæan Botanic Garden, Flushing, Feb. 9, 1835.

To the Editor of the Farmer and Gardener.

DEAR SIR:—We think the point has at length been attained, of obtaining a substitute for Lima Beans, suited to a more northern climate, than that very tender variety. The *Prolific Lima* is of recent introduction, and not having been cultivated beyond the limits of two or three gardens, is absolutely unknown to the American public.—It is white, or rather cream-coloured, nearly the size of the small Lima, but exceeding it in thickness, and has a peculiarly rich appearance, which is verified by its quality. It fully equals, and it is even contended that it excels both the other Lima varieties in richness, is at least two weeks earlier, and its produce is far greater—we think we may say four-fold. Like the Lima, it is used as a shell bean, and we think from its various advantages it promises to rival that variety even here, and to supersede it in more northern latitudes. We do not invite applications for it, having only a small supply of two bushels, but in the Autumn of the present year all applicants can receive such quantities as they desire. The Dwarf Bonavista Bean also deserves particular notice for its remarkable richness and delicacy, and may be considered as holding the same rank in this respect, among the dwarf or bush varieties, that the Lima does among the climbers.—It is also exceedingly prolific.

Yours, very respectfully,

WM. PRINCE & SONS.

GUINEA CORN.

Benton, Lowndes County, Jan. 23d, 1835.

To the Editor of the Farmer & Gardener.

DEAR SIR:—Inclosed you have some of the Guinea Corn Seed.—It should be sown very thin in drills, about three feet from drill to drill. In cutting, where it is desirable to save seed, leave one stalk to every foot or two; all the lateral shoots should be taken off, at least every ten days—It requires little or no work, unless the ground is very grassy. I prefer it to the Gama Grass, or any other I have ever seen for feeding in a green or uncured state, and I am of opinion that it will yield more than any other grass in a cured state, as a crop can be gathered from it each month, or every three weeks, from May until it is desroyed by the frost. When it first springs up, it has a very delicate appearance, but in a short time it becomes very strong, and from a single root, will raise from ten to twenty shoots that will grow from two to four feet high in ten or fifteen days, according to the season and soil. Though it grows well in every kind of soil that will produce any kind of vegetation, yet a rich loam with a little sand and moderately dry is best.

The Gama Grass Seeds I will forward immediately, according to directions.

Yours, with sentiments of the highest regard,

WM. B. JOHNSON.

The Farmer.—The farmer should have a thorough knowledge of soils, and the best and most improved methods of cultivation; he should be ready to adopt the improvements that tend to the saving of labour and expense, and the increasing of products. If there is a way to make two blades of grass grow, (and there are many such ways,) where but one grew before, he should know it, and give himself and his country the benefit of it. If a breed of stock is found, more kind for milk or fat, than he had before, his attention should be alive to the subject.

Every farmer, who has natural understanding, ought to be a well informed man, in reading and thinking, in theory and practice; such we all ought to be, and such the farmers of this country can be.—*Janes.*

EDUCATION OF THE STOMACH.—We know that all the appetites are allied to one another; that they all form physiological habits; and that these *habits* have an almost uncontrollable influence over the *moral man.* We cannot, therefore, be too guarded in the judicious *education of the stomach*, if we may be allowed such an expression. For there cannot be the least doubt, that thousands of adults might this day have enjoyed a good *character*, sound *health*, and happiness, who have lost all through neglect on this point.

When Anatomy, Physiology and Hygiene shall assume an importance at least equal to Arithmetic, Mensuration and Surveying in our schools, then, and not till then, shall we properly value the education of the physiological functions.—Then may we expect to see the efforts of the head, the heart and the hands united in the amelioration of the condition of man. Then shall we see a rapid decrease in the cases of bodily disease, as well as in the degradation of morals arising from the intemperate indulgence of the appetites. Even the dyspeptic himself, who has always lived a borderer on insanity will then be restored to his natural vigor of body and mind.—*Dr. Keagy.*

The London New Monthly, for January, is an unusually interesting number. We extract the following description of an Irish cottage from one of the articles, as peculiarly graphic:

"Tell me of the cottage, Loggin."

"God bless you, Ma'am, you're cruel fond of hearing of cottages; sure the history of most of them to this country is alike;—a wedding, and little to begin with—a power of children, and little to give them—rack rent for the bit of land, turned out, bag and baggage, for that or the tither—beggary, starvation, sickness, death!—That's a poor Irishman's calendar, since the world was a world, barrin here and there, now and then, when he gets a sight of good fortune, by mistake."

MASON'S AND DIXON'S LINE.—The question is often asked, '*what line is this?*' and it is as often answered, '*I don't know.*' At the suggestion of an intelligent friend, we state what this line is. It divides Pennsylvania and Maryland, commencing at a point at a certain distance north of Cape Henlopen on the Delaware, and running west to a certain point of longitude. Long and vexatious chancery litigations were had between the proprietaries of Maryland and Pennsylvania, respecting this line. It was finally run and established under an order of the English court of chancery.—The surveyors were two gentlemen of the names of Mason and Dixon. Hence it is called Mason's & Dixon's Line.—*Cincinnati Gazette.*

THE FARMER.

[From the New England Farmer.]

NEW VARIETY OF TURNIP.

At a meeting of the board of Trustees, of the Massachusetts Society for promoting Agriculture, held on Saturday, 10th of January, 1835,

A letter was read from Martin Brimmer, Esq. accompanying a package of turnip seed, with a pamphlet, which he brought with him from Scotland. It was thereupon

Voted, That the thanks of this Board be presented to Mr. Brimmer for his very acceptable gift of the Hybridal turnip seed, and the Trustees also express the hope that the example of Mr. Brimmer may induce other gentlemen when absent to bring back with them new varieties of seeds and fruits, and thereby essentially promote the Agricultural interests of the country.

A Copy of the Record.

BENJ. GUILD, Rec. Sec.

Boston, Jan. 7, 1835.

SIR—I have the honor to send you herewith half a pound of seed of a new variety of Turnip, which I recently procured in Scotland, called "Dale's Hybrid Turnip." It is the cross of the White Globe and the Swedish Turnip, and is found to combine the good qualities of both,—the rapid growth and great size of the former with the nutritive matter and hardiness of the latter. I have to remark that this variety has found favor in Scotland, and in the anticipation that it may prove valuable in this country, I place at your disposal the accompanying sample; I also enclose some remarks taken from the "Quarterly Journal of Agriculture," in which the subject is treated more at large, and to which I beg to refer.

I have the honor to be, Sir,

Your obedient servant,

M. BRIMMER.

HON. THOMAS L. WINTHROP,
Pres. of the Mass. Society for Promoting Agriculture.

On a Hybridal Variety of the Turnip.—By Charles Lawson, Seedsman, Edinburgh.

Since the period when Linnæus clearly demonstrated the functions of the anthers and stigmas, numerous additional evidences have been adduced in support of the doctrine of the sexes of plants. The question has long been set at rest, and it would be now, in botany, a heresy of the first order to throw doubts on the theory of impregnation. In fact, that process is performed by the contact of the sexual secretion of the male plant, or of the male organs of the hermaphrodite plant, with the female organs. Upon this hint, botanists have not only observed many of the curious contrivances to which nature has had recourse in rendering sure the progress of impregnation, but have let loose their imagination, and invented others for her. It is well known. that in the animal kingdom, a male and a female of two different species belonging to the same genus, may occasionally, by the force of circumstances, break through the antipathy in which they hold each other, and that a progeny participating of the forms of both parents may result. It might be imagined that in plants such intermixtures should be of more common occurrence. The pollen, wafted by the winds, or conveyed by bees and flies, may be applied to the stigmas of other species as readily as to those of its own. Yet, whether it be that the germens are impregnated by the pollen of their own flower, before any other pollen reaches them, as is undoubtedly the case in most plants, or that there is an organic inaptitude between the pollen and the stigmas of different species, it so happens, that, in a field where there exist multitudes of flowers of numerous species, many closely allied to each other, one cannot, on searching, find a single hybrid. Nevertheless, that hybrids have occasionally been produced, we have abundant evidence. Kolrueter, for example, crossed the Nicotiana rustica and Nicotiana paniculata.* The genera Brassica, Geranium, Ranunculus, Saxifraga, and others, are supposed by some, from a few original species to have produced their present multiplicity of forms. To the numerous variety of Melons, Strawberries, and other cultivated plants, a like origin has been attributed. In the animal kingdom, hybrids produced in the wild state are extremely rare, and when produced in the domestic state, do not continue in their mixed form. Hybrids of wild plants are also, as has been stated above, comparatively rare; and, as we see the same forms re-appear season after season, we must suppose that if they exist, they are only of ephemeral duration. The case, however, is different in cultivated vegetables, of the crossing of two of which an instance is here related. The crossing here is between the Common Turnip, *Brassica rapa*, and the Swedish Turnip, which some suppose a distinct species, and others merely a variety of the former.

Though there is a considerable number of varieties of the turnip in cultivation, which are more or less held in esteem according to their supposed qualities, the nature of the soil in which they are to be grown, and other circumstances, those in most general use are the White Globe, the Red-Top Yellow Bullock, the Green-Top Yellow Bullock, and the Swedish. The White Globe, grows to the largest size, arrives soonest at maturity, and decays earliest in the season; the Yellows are intermediate between the Globe and the Swedish in their properties; and the Swedish is smallest in size, is latest in arriving at maturity, and often does not decay, till, in the advanced state of the following spring, the plant loses its nutritive properties by pushing out a flower-stem; hence, the Swedish is well adapted and chiefly employed for spring feeding. The Swedish Turnip possesses the greatest nutritive powers, and the largest of this variety yields more nourishment in proportion than the middle-sized ones; while the Globe, which attains the greatest bulk contains the least nutritive matter, and the larger kinds less proportionally than the middling-sized ones of the same variety.

New varieties or hybrids of turnips are obtained by cross impregnation. Thus, when two varieties are planted alternately or promiscuously in a plot of ground, when they come into flower the pollen is wafted by the wind indiscriminately over the whole, or carried from one plant to another by insects, when they are in quest of the sweets of the nectary, and applied to the stigmata. But though the means of producing new varieties are simple and easily accomplished, little improvement in this respect has been made in varieties now generally used in field culture.

In all cases of turnip seeds' going through my hands in the course of a season, I keep specimens which are sown at the proper period in drills in my nursery. This is done for the purpose of examining the progress of the plants and the developement of their roots during the season; it also enables me to ascertain the correctness of the different stocks of seeds, and to judge of the superiority of one variety over another. Two years ago, my attention was particularly attracted to the produce of the sample of a hybrid or doubly-impregnated sort, the seed of which I received from Mr. Robert Dale, a very intelligent farmer at Libberton West Mains, near Edinburgh. It attracted my attention, first on account of its early growth and maturation; secondly, its fine shape, as will be seen on inspection; thirdly, by the great size to which it attained, in comparison with any sort under similar treatment; and lastly, by its standing the winter equally well with any other turnip except the Swedish.

And conceiving that the great desideratum in the selection of a proper variety of the turnip, is to obtain the greatest possible weight on a given space and at a given expense of manure, this variety seems to be more adapted to this end than any other sort hitherto introduced.

The manner in which it was obtained by Mr. Dale, was the following: In the year 1822 or 1823, he got a few ounces of seed of a new hybrid turnip from James Shireff, Esq. of Bastleridge in Berwickshire. This, Mr. Dale sowed, and he found the produce to resemble the Swedish in shape, but it had too few of the superior properties of that variety. He, therefore, picked out such as had most of the yellow appearance, and planted them along with some of the best Swedish which he could find. This he continued doing for four successive years; and, since that period, he has selected the best roots of the doubly impregnated kind which he could find for raising seed, till they have attained the quality which they now possess.

The manner in which this variety has been obtained, I am aware, is not according to the nice rules which horticulturists would have recommended to be adopted, because, as the hybrids were always planted along with the Swedish for producing seed, and the seed collected promiscuously, that part of the seed which was produced from the Swedish would be much more nearly allied to that variety than the seed of the hybrids. But in this, as in many other instances of improving plants, the point is often attained more from accidental causes than from the adoption of the rules laid down by scientific cultivators. And, al-

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* Within these few months, different species of Calceolaria have been successfully crossed at the garden of Lord President Hope at Granton, as described by Professor Graham in the Edinburgh Philosophical Journal for July, 1830. All the fine new Pears, Apples and other fruits, of Mr. Knight in England, and those of the Earl of Dunmore in Scotland, which are nowise behind them, have been produced by dusting the stigma of one kind of blossom (previously deprived of its stamens) with the pollen from another.

though all the hybrids may not stand in the same relation to the primitive root, the circumstance of the raising the seed being now performed solely by the hybrids themselves, without the assistance as formerly, of the Swedish, will always have the tendency to assist in modifying and correcting any irregularity that may exist. Indeed, judging from the appearance of the present stock, there is nothing which indicates any important consequences to this irregularity in the manner of obtaining the hybrids.

To show in what respect this hybrid is superior to, or differs from, the turnips at present in cultivation, I shall give a list of the kinds sown for different purposes, with a comparison of their properties with that of the hybrid in question.—The turnips in general cultivation are the following:

FOR EARLY USE,

White Globe, White Tankard, Pomeranian Globe, Hungarian Globe,	The hybrid is equal in size to any of these, is closer in the texture, and is as early.

TO SUCCEED THE ABOVE,

Red Norfolk, Green Norfolk, White Norfolk, Green Globe, Red Tankard, Yellow Globe, Bullock's Heart,	The hybrid is superior in size, in texture, and in shape, to all of these.

STILL TO FOLLOW THESE,

Purple-top Yellow Bullock, Green-top ditto, Tankard Yellow	The hybrid is superior in size, and, in so far as it has been tried, it stands the winter as well.

FOR LATE USE,

Purple-top Swedish, Green-top Swedish,	The hybrid is superior in size, but shoots to flower earlier in spring, & is not so hardy

This hybrid, or doubly-impregnated turnip, therefore, appears to possess properties in general, superior to those varieties which have been enumerated above. It is equal to, or surpasses the yellow, and the other sorts above it, and is only excelled by the Swedish, in the latter being more hardy and later in spring in running to a flower-stem. It is now generally known by the name of Dale's Turnip, or Dale's Hybrid.

The facts which I have stated will, I trust, be considered in this respect interesting, that they show an easy method by which intelligent agriculturists may increase or improve the varieties of the plants which they cultivate.

[From the Cultivator.]

Chenopodium quinoa—and the potato.

The first is the botanical name of a Mexican plant, the culture of which is now arresting the public attention in England. Humboldt says, that this plant, in Mexico, ranks in utility with the potato, the maize and the wheat. The leaves are used as spinach, or sorrel, or as greens; and the seeds in soups and broths, or as rice. The plant is an annual, and resembles French spinach. The seeds are small, yellowish white, and resemble somewhat those of millet. In 1834 seeds ripened in abundance in England for the first time, and as a field plant, it is considered a great acquisition. It is believed it may be cultivated as common as barley, and on any ground which will produce that grain. The Quinoa will no doubt ripen its seeds in the United States, even in our latitude, better than in England, and our consular agents, naval officers, or commercial men, might render a public service by introducing it among us.

When we consider the comparative recent introduction of the potato (*Solanum tuberosa*) among many civilized nations, the prejudices which in many nations for a long time retarded its introduction, and the large space it now occupies in domestic economy, as food for man and beast, in almost every part of the civilized world, these considerations should induce us to give a fair trial to every foreign plant which promises to be useful in our husbandry. The first field culture of the potato in Scotland was in 1739, less than a century ago. They were left in the same spot of ground from year to year; a few tubers were perhaps used in autumn, and the parent plants well covered with litter, to save them from the winter's frost. The progress of the culture was afterwards greatly retarded, by the fact, that "potatoes are not mentioned in the bible," which was deemed a sufficient reason for rejecting them. Ignorance of the proper mode of cooking them, (an evil which has not wholly ceased at this day) also retarded their culture. "A person who had been invited to taste the first potato in the county of Forfair, about 1730, related that the roots had been merely heated, and that they adhered to the teeth like glue, while their flavor was far from agreeable. The food was about to be condemned through the ignorance of the cook, when the accidental arrival of a gentleman, who had tasted a potato in Lancanshire, caused the rejected roots to be remanded back to the hot turf ashes, till they became as dainty as they had before been nauseous." "It is only within these forty years that any particular attention has been paid in France to the cultivation of potatoes. They were long regarded as an unwholesome plant, and only fit to be eaten by cattle and the most wretched human beings." It required all the efforts of royal authority, supported by royal example, to eradicate the popular prejudice against them. Now so diversified is the manner of cooking the potato in France, that a gentleman is said to have dined a party of friends, sumptuously, entirely upon potatoes, cooked in thirty-two various modes. "The composition of the potato root is very similar to that of the seeds of the maize and wheat; though, from the dissimilarity in taste and external appearance, this would not be at first suspected; and hence arises the corresponding fitness of all three for food. The principle difference between wheat and potatoes consists in the presence of a substance called *gluten* in wheat."

The detection of this similarity between grain and potatoes, by chemical analysis, led to the experiment of extracting *sugar* from the potato. As we have been inquired of, as to the process of extracting sugar from the potato, we subjoin the particulars, as we find them in the Edinburgh Quarterly Journal of Agriculture—the discovery and the experiments having been first made, we believe, in the state of New-York.

The potatoes are first ground or grated in a mill similar, or the same, as we denominate the grater cider mill, by which they are reduced, with surprising rapidity, to a fine pulp, and from which, by the aid of a sieve and water, the starch, in great purity, is readily obtained. The starch thus obtained, is then dissolved completely in water, heated by steam let into it. A certain quantity of sulphuric acid, or vitriol, is then mixed with it, and heat being applied, the whole of the starch is converted into syrup. This is to be purified from the acid by adding quick lime, with which the acid unites, and then evaporating the liquid. The sugar remains after evaporation, and is used for all domestic purposes. Its taste is that of a delicious sweet, and as an article of diet is probably more healthful, and less oppresive to the stomach, than any other sweet substance in use. It is particularly useful in making sweet meats, and may be used at table as honey. A bushel, or 60 lbs. of potatoes, will give 8 lbs. starch, and 8 or 7½ lbs. sugar. The article, which we here abridge, seems to have been copied from Silliman's Journal, which may contain a more detailed account of the process.

There are various other uses to which this valuable root is now converted, that our ancestors never dreamt of.—From the potato may now be procured bread, starch, jelly, sugar, treacle, beer, brandy, cheese, butter, coffee, tapioca, dye-stuffs, size, cleansing liquids, and medicine.

The Russians, (and we have seen a notice of the same having been done in Ohio) obtain from it treacle, or molasses. The Swedes and English obtain from it brandy by distillation. Dr. Anderson obtained a gallon of *spirits* from 72 lbs., of a mild agreeable flavor. The Saxons make from it a kind of *cheese*, which retains its freshness for years if kept in a close vessel. It is prepared by boiling the potatoes, and reducing them, when cold, to a pulp, rejecting the skin; sour milk is added, or else sweet curd, with the whey pressed out, in the proportion of a pint to 5 lbs. of pulp. It is kneaded several times, drained in small baskets, and simply dried in the shade. A French chemist has converted the potato into a substance resembling, and he says superior, to *coffee*. He mixes some best olive oil with a certain portion of dried potato-flour, and then adds a small portion of coffee powder. The Germans incorporate it, after being steamed and reduced to a paste, with the *butter* to be spread over bread. Chemical ingenuity has likewise converted it into substitutes for *arrow-root*, *chocolate*, *tapioca*, and *vermicelli*. The Danes have discovered in the flowers the material for a beautiful yellow dye, solid and durable, which by being afterwards plunged into a blue dye, becomes a perfect green. The potato is always used with excellent effect in steam boilers, for preventing the gathering of a calcareous incrustation on their bottoms. The liquor drawn off in the process of making potato starch, will clean silks, woollens or cottons, without damage to the texture or color. The French administer it, roasted, and with success, medicinally, to their sailors, as a preventive of, and even for, the scurvy.—*See Quarterly Journal of Agriculture.*

THE BREEDER & MANAGER.

[From the London Lancet.]

LECTURES ON VETERINARY MEDICINE, *Delivered in the University of London by Mr. Youatt*—Lecture XII.

OZENA IN THE HORSE.—WORMS IN THE NOSTRIL OF THE HORSE.—OZENA AND CORYZA IN CATTLE AND SHEEP.

Ozena is ulceration of the Schneiderian membrane, not always, or often, visible, but recognised by the discharge of muco-purulent matter, and from the peculiar fœtor from which the disease derives its name. It resembles glanders in being confined in most instances to one nostril, and the submaxillary gland on the same side being enlarged; but differs, however, from it, in the gland not being adherent, and the discharge from its earliest stage being purulent and stinking.

How distinguished from other Diseases.—There is sometimes a fœtid discharge from the nostril in consequence of inflammation of the lungs, or produced by some of the sequelæ or pneumonia. When, after rapid congestion, there has been a breaking down of the substance of the lungs, and mortification has seemed to have commenced during the life of the animal, and also when vomicæ have burst, there has been a considerable discharge of purulent matter, distinguished however from ozena, by its usually flowing irregularly, and being coughed up in great quantities, and more decidedly purulent, and the gland or glands seldom affected. The discharge from ozena is constant, *muco*-purulent, and unattended by enlargement of the glands. It is of immense consequence that we should be enabled to distinguish the one from the other; for while ozena may sometimes, at least, be manageable, the other is the invariable precursor of death.

Cause.—The cause of ozena cannot always be discovered. Chronic inflammation of the membrane may assume another and a malignant character. In severe catarrh the membrane may become abraded, and the abrasions may degenerate into foul and fœtid ulcers. It is not an unfrequent consequence of epidemic catarrh. It has been produced by caustic application to the lining membrane of the nose. It has followed hæmorrhage, spontaneous, or as the consequence of injury. I had a horse, not many months ago, sadly ill with epidemic catarrh; the soreness of his throat almost precluded the possibility of balling, and in the administration of a drench, he struggled and snorted, and began to bleed profusely from the nose, and, three days afterwards, the smell from that nostril was in the highest degree offensive.

In some cases, and those as obstinate as any, I have not been able to trace any probable cause, and the health of the animal has not appeared to be in the slightest degree affected.

The membrane of the nose is highly sensitive and irritable, and an ulcer, in whatever way formed on it, does not readily heal. It runs on to gangrene; it destroys not only the membrane, but the bone beneath, and the cartilaginous septum does not escape. This is rarely the case in glanders; the ravages of the chancrous ulcers are usually confined to the membrane. I have seen caries of the greater part of the superior turbinated bone, when there was no reason to suspect glanders.—The ulceration proceeds to a certain point—its progress is then arrested, usually by nature alone—the discharge gradually lessens—it loses its offensive character, and at length ceases. It is a most annoying disease, for the whole stable is tainted with the smell, and although the discharge may almost cease to appear, the stench will remain week after week in spite of all our efforts.

Treatment; External applications.—Well, Gentlemen, we must do something. Local applications; are they available? I fear not. There are two sufficient reasons against their use. We seldom know the place of the ulceration, and if we did, probably could not get at it. You will recollect what I have said about this when treating of glanders. Some have recommended setons.—Where are they to be applied? If the seat of ulceration is unknown, the seton will only give useless pain. The trephine:—where again shall we apply it? Some postmortem examinations have shown, that the frontal sinuses were the seat of disease. If we could be sure of that in every case, we might easily get at them. Yet what injection should we use? An emollient one would be thrown away. A stimulating injection might convert ozena into glanders. Other examinations, however, have shown that the superior portion of the central meatus was diseased. What instrument can be contrived to reach that?

Internal Medicines?—I take them to be completely thrown away. I know nothing of *antiseptics* in the horse or cattle, and as for *tonics*, they have all been tried over and over again, and without the slightest benefit.

Fomentations.—Yet we may do something.—We may do something, perhaps, under the form of a local application. The discarded nose-bag, (undervalued at least by too many practitioners,) will afford the means of employing an emollient fomentation. The steam from a bran-mash scalding hot, will probably reach every part of the nasal cavity, and so afford some chance of being beneficially applied to the ulcer. It will at least thoroughly cleanse the part. By means of the nose-bag and the warm mash, the chloride of lime may be introduced into the cavity, not only combining with the extricated gases and removing the fœtor, but arresting the tendency to decomposition.

Then there is a digestive—a gentle stimulus to abraded and ulcerated surfaces, rousing them to healthy action, and without too much irritating them—turpentine. We may apply this in the form of vapour, and in the best of all ways, by using the fresh yellow deal shavings instead of bran. This digestive may be brought into contact with every part of the Schneiderian membrane, and has been serviceable.

The ulcer, however, may not be in the cavity of the nose, or if it be there, it may bid defiance to a stimulus so gentle as this, and a more powerful one we should hardly dare to use. Then we have another resource, and one that bids fairer to be successful than any other with which we are acquainted. The spring grass;—it is the finest alterative, depurative, and restorative in our whole materia medica; and if a salt-marsh should be at hand, we have still better hopes. The horse to which I just now referred was turned into a salt-marsh for five or six months; he came up with only a faint smell remaining, and that is gradually disappearing; but then I turned out another horse in the preceding spring, and as nearly as possible in the same state, and he became glandered and died.

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WORMS.

These parasites have been found in the nasal cavity of the horse, or the sinuses connected with it. A mare had chronic nasal gleet, accompanied by frequent and distressing cough. Bleeding and sedative medicines had been tried in vain. The groom had heard strange stories of worms and the larvæ of certain insects finding their way into the nose and the cells connected with it. I ridiculed the idea, but on the same evening he blew a small quantity of pepper up the nostril of the horse, and in his violent sneezing, two small worms were discharged. I did not see them, and I have only the word of the groom for the fact, who with great triumph told me of the circumstance on the following morning; but I do know, that from that time the cough abated, and the animal soon got perfectly well.

Bourgelat relates a case in which a horse discharged a worm of the filaria species from his nose. He had been gradually wasting, and he continued to waste, and died. A post-mortem examination did not unfold any evident cause of death, but discovered other worms of the same species in the frontal sinuses.

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CATTLE—FRACTURE.

Cattle are not so much exposed to fracture of the nasal or superior maxillary bones as the horse is. The blows that are aimed at them, both by man and brute, generally fall comparatively harmless on the broad expanse of the frontals above, which, from the strength of their curiously-constructed base, almost defy injury. The means pursued to reduce fracture would be the same, with the important advantage of not having the fear of glanders before our eyes.

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CORYZA IN CATTLE.

Coryza is more frequent in cattle than in the horse, accompanied by the same mucous, purulent, fœtid, excoriating discharge, but not so often running on to catarrh, bronchitis, pneumonia, and phthisis.

Causes.—The prevailing causes are the same overheated houses, or imprudent exposure to cold; but the membrane of the nose is not so much irritated, or disposed to inflammation, by ammoniacal gas, or other injurious effluvia. A cow-house may be as injudiciously close and heated as a stable, but its atmosphere will be of a very different character; no pungent vapour will there irritate the Schneiderian or conjunctival membranes, because the urine of the ox does not contain the superabundant quantity of ammonia which is found in that of the horse, and held by so loose an affinity. There is, however, one unsuspected, but too powerful occasional cause of irritation and inflammation of the Schneiderian membrane in cattle, namely, the dust and gravel of the road. The ox was not designed to be exposed like the horse to this annoyance. He has no false nostril to turn off the current of minute and irritating par-

ticles from the more susceptible parts of the nasal cavity. Oxen driven any considerable distance to fair or market in dry and sultry weather, are sure to suffer, and sometimes materially, from coryza. Dairy men, whose cows have to travel half a mile or more, morning and evening, along a dusty road, wonder that with all their care the beasts should be so subject to hooze. The cause is too palpable, although little suspected by them. The symptoms of coryza are the same—snorting, laborious breathing. The discharge the same; acqueous; transparent at first; and gradually becoming opaque, mucous, purulent, and bloody.

Periodical Coryza.—There is a periodical appearance of coryza in the ox not observed in the horse. During the winter season, and probably from our mismanagement—from undue exposure of the animals to cold, or to extremes of heat and cold—there is a considerable nasal gleet; not interfering much with health, but unpleasant to the eye and troublesome to the animal; and which, in despite of all our medical treatment, will remain. Do not let us be too much alarmed, for when the genial warmth of spring returns, it will disappear as suddenly as came its attack. Yet not always: it has continued purulent, green, bloody, for years, and the health has been scarcely affected, because the Schneiderian membrane has not been previously exposed to the same injurious and debilitating influences as in the horse. Therefore it is that the farmer scarcely regards a cough, although a harassing and long-continued one, in his cattle, for in the majority of instances the beast carries its usual flesh, and yields its full quantity of milk, and it is only when the milk fails, and rapid emaciation is perceived, that he begins to look about him.

Caution to the Practitioner.—You, Gentlemen, I hope, will not be so apathetic, if you have the power to interfere; for cases will occur, and perhaps too frequently for the full maintenance of your professional reputation, in which, as I have just told you, the inflammation will extend to the fauces, and creep down the trachea, and invade the lungs, and lay the foundation for tubercles, vomicæ, and death.

Treatment.—If you have the opportunity without seeming to look out for, and unnecessarily to make, cases, you will warn the farmer of the imprudence and danger of neglect, where inflammation of any portion of the respiratory passages is evident.

In treating the animal with inflammation of this, the first of the respiratory passages, you will anxiously inquire whether the disease may not have proceeded further. Is there cough, and that plainly giving the animal pain? any increased labor in breathing? diminution of appetite? suspension of rumination? fever? ascertained by the symptoms just enumerated, but more by the pulse. Does that much exceed 40, the natural standard in a healthy middle-sized animal? You will in cattle, as in the horse, best examine the pulse where the submaxillary artery passes over the edge of the lower jaw to be distributed on the face, but you must look for it at least an inch and a half nearer the tuberosity of the lower jaw than you find it in the horse. The degree of animal temperature will likewise guide you as to the existence and extent of fever. You usually ascertain this in horse by putting your finger in the mouth of your patient; you must not do so here, at least with a horned animal, lest the farmer should suspect that you knew not how to handle a beast. You would obtain the degree of temperature as accurately as you would in the horse, but the farmer has found out another place where with greater ease, and almost equal accuracy, he obtains it,—at the base of the horn. I shall have to show you that the bone of the horn is by far the most vascular one in the frame of the ox,—that it is perforated by innumerable blood-vessels, and that the horn, properly speaking, is either a prolongation of the cuticle, or is most intimately united with it, and, at its base, not thicker than it; and therefore when grasped by the head, giving the temperature of the blood flowing immediately underneath. The farmer knows no other place at which he may ascertain the heat of the blood, and you must humour him by doing that which all who are much used to cattle invariably do.

Proper medicine and dose.—You will be guided by the degree of fever. If little or none is indicated, a warm mash, and a dose or two of cooling medicine, will probably set all right. The medicine will be that which I have recommended for the horse—the digitalis, tartarised antimony, and nitre, in the same proportions, but only in half the quantity. I would lay this down as a rule, that the ox, into whose true digestive stomach your medicine may be introduced at once, when given in the form of a drink, requires but half the quantity which you would give to the horse, in whose vascular, half cuticular stomach it is received. Our continental neighbours, and some English practitioners, erroneously reverse this.

The dose must depend on the degree of fever; but in usual cases, and for a moderate-sized animal, I should consider half a drachm of digitalis, three quarters of a drachm of tartarised antimony, and two drachms of nitre, a medium dose. And, once for all, I would state, that cattle medicines, unless those which are designed to be stomachic, and I do not know that I should often except them, should be given in the form of drink. They then pass at once into the fourth or true stomach, and produce their effect; but a ball, by its weight, breaks through the curiously-constructed œsophagean canal which I shall have to describe to you, and enters the cuticular macerating reservoir, the rumen, where the only effect it can produce will be a mischievous one, for it will give an unpleasant taste to the food, and nauseate the animal, and lead to the cessation of rumination, and be followed by indigestion, extrication of gas, and tympanites of the stomach, and thus neccessarily aggravate the previous disease.

If the inflammation has spread, and fever exists, it will be prudent to bleed and physic; but the disease has now assumed a new character; it is catarrh, or something worse, and the treatment to be pursued will be considered under the proper heads.

SWELLINGS.—To scatter swellings on Horses or other cattle, take two quarts of proof whiskey, or other proof spirits, warm it over coals, but not to blaze—dissolve it in a pint of soft soap—when cool, put in a bottle, and add one ounce of camphor. When dissolved it will form the liquid Opodeldoc, and is then ready for application, forming a cheap and useful remedy. When the swelling is on the leg, or any part that will receive a bandage, such bandage should be applied, and wet with the Opodeldoc.

THE GARDENER.

[From the Horticultural Register.]

ON THE CULTIVATION OF CELERY.

It appears to me that a few practical hints on the cultivation of this useful and delicious vegetable might prove interesting and serviceable to many of your readers. I beg to premise that it is a mere detail of the methods I have practised this summer, by which I have raised celery in heads of two and two and a half feet high, of which twelve to eighteen inches are blanched and tender; they are single heads, without offsets, and many four and five inches in circumference. This method has one convenience, which is, that the young plants are raised in the open ground, without glass or hot-bed.

In the beginning of May, later or earlier, as the season may indicate, dig and pulverise well about six square feet of well manured and open ground—water it very lightly, but thoroughly, with a nose on the watering-pot, early in the day, then sow your seed and water again thoroughly in the same way. Cover up this bed lightly with a double layer of Russia mat, which should be dry, and kept down at the corners with stones; the sun, striking on the mats, penetrates them, and causes a gentle moist heat to rise from the earth; this is the most favorable state of an atmosphere for the vegetation of seeds, and the celery, particularly if not fresh, is very difficult on this point; the covers should be maintained in as dry a state as possible, (after heavy rains, the upper mat might be changed,) because, if wet, considerable evaporation takes place in the night, which is always productive of cold, and would be apt to rot the tender shoot just piercing the seed; on the other hand, if dry, it prevents the escape of heat when the sun's rays have left the earth, and retains underneath sufficient warmth to prevent any check in the vegetation; in a fortnight or three weeks, according to the season, little yellow and white sprouts will appear; when these are one quarter of an inch high, the upper cover should be removed, that there may not be too much weight on the young plants, and if the weather continues mild, in a few days afterwards, remove the other. If well watered in the beginning, it will scarcely need any further moisture during the first process; but those who practise this method will hardly be restrained from peeping under the mats once or twice during the fortnight, when, if sultry weather has prevailed, their own judgment will guide them on this head.

The second part of the method is to have another piece of ground, double the size of the former, prepared in the same way, and when the young plants are in their fourth leaf, or about two inches high, take them up and transplant them carefully into this fresh bed, about one inch asunder, first trimming the roots a little.

If well watered and weeded, by the first of July

they will have attained sufficient growth to be removed into trenches, which should be prepared in an open, well exposed spot, by digging them two spades deep and two and a half feet wide, leaving three or four feet distance between the trenches; on this space is to be piled up, like a bank, the earth taken from the trenches. Put about four inches of good manure at the bottom of each trench, and dig it in; take up the plants, and previous to putting them into the earth, trim the roots very carefully, being sure to cut off the end of the tap root, and eradicate all little shoots and radicles, where the heart joins on to the root, as these shoot up and produce that mass of small heads seen in our markets, instead of one large, solid handsome plant; place them about three inches distance and water well for the first week. As the plant grows, gently fill in the trench with the earth on each side, taking care not to throw in large lumps, which twist and contort the celery, and spoil its beauty; and continue earthing up until there is a bank above grouud as high as the trench was deep.

I prefer digging the trenches east and west, because the bank on each side shades the young plants in July and August from the rays of the hot sun, and in September and October, when it is desirable the celery should advance as much as possible, the southern bank, earthed up, imbibes the heat and retains it.

I believe, by covering up the trenches well with pine and savin boughs, it may be dug fresh all the winter; but I have placed mine in an upright position in the cellar, half covered with earth and kept moist—they appear to suffer but little.

I have been rather explicit, and given my reasons for each operation at the risk of being thought too prolix; but, whenever I set earnestly to cultivate a plant, I have generally found directions in books rather too vague, here and there a link wanting in the chain, which gave me trouble to annex; those, therefore, who are well acquainted with this process, must excuse this in favour of those who are not so efficient.

Of celery there are but few varieties worth cultivating; we prefer the white and red solid stalked upright, as being much sweeter than the large species.

For the last two or three years a series of most interesting experiments have been prosecuted in Europe, all of which tend to prove that most plants, after absorbing their by roots, the nourishing juices of the earth, select those which are necessary for their growth, then through other vessels reject and leave behind them the refuse, a kind of exuviæ. This, although perfectly useless to this tribe of plants, may become good manure, or at least not be injurious to another tribe, which will then succeed and thrive on the same spot; or it may be that the first plant only takes up those juices suited to it, and leaves undisturbed those adapted to the second. Something of this kind has been for years proved by the practical horticulturist and agriculturist, they having discovered the utility and advantage of rotation crops, although the reasons have been hitherto concealed even from the man of science. Thus McIntosh in his Practical Gardener, states, and others have proved it also, that celery constitutes an excellent preparation for asparagus, onions, and cauliflowers; turnips or potatoes for cabbages and greens. The farmer also has his regular succession of seeds. It may also be that manure not only renews the exhausted juices, but also by some invisible and slow process, perhaps continued fermentation, converts these exuded remains of vegetables into gaseous forms, by which they are removed from the soil. In fact, the speculations on this subject are numerous, but it is probable they will be set at rest by the philosophical inquiries still pending. The last notice I have seen respecting this important question, is that a paper was read on the progress of researches made on the secretions from the roots of vegetables, by Professor Dunbar of Scotland, before the Section of Natural History, at the late great meeting in Edinburgh of the Association for the Advancement of Science. I am not aware that the contents of this paper have been made public, but I have taken steps to lay them before the readers of the Register, at as early a date as possible. J. E. T.

[From the New York Farmer.]

Suggestion relative to Farmers and Gardeners' Work for February. By S. F.

"Friends, books, a garden, and *perhaps* his pen,
Delightful industry enjoyed at home,
And nature in her cultivated trim
Dress'd to his taste, inviting him abroad—
Can he want occupation who has these?"

Although stern winter rules, with scarcely any diminution of his power during this month, still every one who has a garden, including all the farmers in the country, should remember

"How various his employments whom the world
Calls idle!"

What! the busy world call him an idler whose industry supplies the living with food? Indeed there is an impression—that he who tills the soil in enlightened lands is, when winter reigns, less active in mind and body than the savage who roams the broad forests in quest of his daily food. Those who indulge this impression have figured to themselves beings residing in the bleak and dreary *country*, with their cellars supplied with cider, pork and sauce,—their barns filled with hay, and their fires kept brisk and cracking. They look upon a farmer as one who, in winter, lives to eat pork and cabbage, drink cider, smoke his pipe, and then go to bed. Fortunately and happily they, whose lives in this season of the year have served to spread such an impression, are decreasing in number. It may now be said, that there is, in winter, more employment of mind and body than formerly among farmers and gardeners. Is it not a consequence of the progress of knowledge and the arts, that the active and busy season will encroach upon, and shorten that which has hitherto been considered one of inactivity? Will not the increasing wants of mankind, and the achievements in science and arts, furnish the farmer with new sources of employments? Will not

"Books, a garden, and perhaps his pen,"

in addition to other calls of duty, render the cold months those of the greatest bodily and mental activity? Will not this activity be very conducive to health and happiness? Will it not give a greater relish for the more toilsome labor of the warmer and hotter season? All who best know man, will answer in the affirmative. Doubtless many slothful habits have been contracted and many views engendered, from the want of more mental and bodily exercise or business. Those who are continually active in body and mind, are the least liable to fall off from their industrious and virtuous habits. Providence has so constituted things, that those who assiduously cultivate the whole man, derive the greatest pleasure in the changes of the season, and in the discharge of the duties peculiar to them. With how much more rational, and with how much higher pleasure, will that farmer hail the return of vivifying warmth, who has spent his winter evenings as industriously with his books and pen as he has done the days in

"Delightful industry enjoyed at home,"

than that one who has looked upon the winter as merely a season of cessation from the labors of summer. Inactivity increases the repugnance to action. This is true, both in reference to mental and bodily exertion. Society abounds in numerous and unhappy examples of both. Those who have discontinued study and writing for any considerable time, well know with what mental struggles the mind is brought back to its former discipline. So it is with him, whose principal duties of the winter have been to eat, drink, and sleep,—he finds it necessary to summon up resolution to undertake vigorously the labors of the opening season. If, therefore, farmers and gardeners would wish to act in accordance with nature, if they wish to pay deference to the indications of Providence, and if they wish to enter upon every change of season, and its every duty, with the greatest possible zest, let them imbibe fully the spirit of the lines at the head of this article. On the supposition that our readers will take our advice, and furnish us with the results of their reading, observations, and practice, we will throw out a few hints on their duties for this month.

Health.—During this and the next month be very careful of the stomach and the feet. Avoid overloading the former, and keep the latter dry, clean and warm. From misusing these portions of the body during the trying months of February and March, many a farmer and gardener have spent April and May on their beds, instead of their fields.

Books for Diary and Accounts.—If these are not already furnished, by all means obtain them immediately on reading this article. They will not only furnish you great satisfaction, but will tend very much to insure your success and prosperity.

Planting.—Every farmer and gardener should fully revolve his plans, and estimate the efficiency of his means.

Preparing.—Every possible preparation for spring work should be made this month.

Manure.—This is the month in which much can be done in preparing manure for early crops. If coarse yard manure is put in large heaps, and not trod down to exclude air, it will undergo a gradual fermentation, and be in fine condition for corn in the hill, and for other purposes. In this way all the manure in the yard may be ready for spring use. If other materials are used with the dung in compost, the heap should if possible be occasionally wet with the liquid manure. Indeed, all the liquid and drainings should go on the heap, and there should be materials sufficient to absorb it.

Hot Beds.—Manure for hot beds should be kept from drenching rains, and turned over several times. For the beds select a warm dry place, protected from mice. Let the dung be 18 to 24 inches deep. After it has been stirred and heated for two or three days, take off the sash or straw; cover the surface with good soil; on this sow about the last of this month, or early in March, cabbage, lettuce, tomato, and egg-plant. Among plants that may be forced are asparagus, kidney beans, peas, potatoes, radish, cucumbers, and rhubarb or pie plant. In absence of experience, judgment and care will generally give success. There are various and pleasing ways of forwarding vegetables.

Pruning.—This may be done in February, but nearer the time of the developement of the buds is better. Moderate pruning is best.

Transplanting Trees.—Should the ground thaw this month, dig around all those trees you wish to remove, and on the return of frost, take them up with the ball of earth on them. If a tree be removed without disturbing the roots, it matters little at what season it is transplanted.

Potatoes and Beans.—Those who have to buy seed potatoes and beans, particularly Lima beans, should be on the look-out for them. Their scarcity will cause them to advance in price until after planting time.

Live Stock.—At this time it is of importance to begin to nurse and strengthen most kinds of live stock: horses and oxen, to prepare them for the season of labor: cows and sheep, to enable them to bring forth vigorous offsprings. The same is necessary for breeding sows, and for poultry.

MISCELLANEOUS.

CULTURE OF SILK.

The manufacture of silk is all that is wanting in this country to complete our system of domestic manufactures. It is only within a few years that wool and cotton factories have been extensively and permanently established. In these branches, particularly the latter, we have shown that American industry and ingenuity can rival European, and compete with the most successful manufactures of Great Britain in foreign markets. This result gives assurance of success in other branches. Numerous experiments in various parts of the Union have demonstrated the suitableness of our climate to the culture of silk. A Washington correspondent of the Albany Argus, speaking of a machine exhibited by a Mr. GAY for reeling and manufacturing silk, justly remarks "that the establishment of the manufacture would greatly encourage the culture, and would be the means of furnishing a supply of the domestic material much sooner than it could otherwise be expected." We shall have the advantage over England in this manufacture when it shall be once established; for her climate will not permit of its culture. Although as with cotton, she imports all the raw material, the manufacture of silk has become one of the most important branches of her national industry. The writer above referred to states, that several years since England paid in one year for raw silk nine millions of dollars; since then the quantity required by her factories has probably much increased. Even France, whose climate permits her to cultivate silk on a large scale, imports the raw material to an immense amount. This is a great field for the profitable application of capital and ingenuity, as yet untouched in this country, and in which new triumphs await the efforts of American skill.—*Amer.*

AGRICULTURAL INSTRUCTION IN PRIMARY SCHOOLS.—The agriculture of Bavaria is said to have been improved more rapidly, in the last half century, than that of any other country, Scotland, perhaps, excepted. Before the French revolution, it was behind that of the other German States. The lands then mostly belonged to the religious establishments. The cultivators merely lived; they did not thrive. When the lands were sold, they were made into small parcels, and almost every man became the proprietor of the portion he cultivated, upon a long credit. The great impulse to improvement was given to the young generation, in the primary schools. In these were taught, both by books and examples, AGRICULTURE and GARDENING. For this purpose, catechisms of gardening, of agriculture, of domestic economy, of forest culture, of orchard culture, &c. in small 12mo. volumes, with wood-cuts, were introduced as class books for boys, and the like on the management of silk worms, household economy and cookery, for the girls; and there was attached to every district school at least half an acre of land, for experimental gardening, where the scholars received recreation and instruction, in the hours of exemption from study, from the master, in the practice of gardening. And it was made an indispensable qualification in teachers, to be competent to give this instruction. "Since these schools have come into action," says a late traveller, "an entirely new generation of cultivators has arisen, and the consequence is, that agriculture in Bavaria is carried to a higher degree of perfection than it is any where else in the central states of Germany." "The result of the whole of the information procured, and of the observations made, is, that we think the inhabitants of Bavaria promise soon to be, if they are not already, the happiest people in Germany. The climate of the country will prevent its agriculture and and gardening from advancing beyond a certain point, but to that point both will very soon be carried."

The salutary influence of agricultural and horticultural instruction, in common schools, has not been confined, in Bavaria, to the improvement of the soil. As consequences which naturally follow the improvement of agriculture, the roads, bridges and other public works, have undergone a corresponding improvement; individual comforts have been greatly multiplied, business of every kind has been improved, and human intellect, reanimated as it were, by the magic pen of a Hazzi, has burst its cerements, and become an efficient aid in the noble work of improvement. The public roads are all lined with ornamental fruit-bearing or forest trees—and furnished with guide-boards, mile-stones, and seats, at intervals, of stones or sods, for the weary traveller. This novel sort of education, and the blessings which have flown from it, and the still greater blessings which appear in prospect, have resulted from the wise provisions of the government, aided, and efficiently aided, by the active and patriotic philanthropy, M. of Hazzi, the editor of an agricultural journal at Munich, and author of the school catechisms of which we have spoken.

Nineteen out of every twenty of the children of our common schools, would be benefitted, while the twentieth would not be injured, by the elementary studies which have proved so beneficial to Bavaria. "*As the twig is bent, so is the tree inclined.*" Early impressions have an influence through life; and it is all-important that these early impressions should be of the right kind—such as are best calculated to advance the interests of the individual, and the good of the public. What can conduce more to these desirable ends than to instruct our youth in the elementary knowledge of the business which they are to follow through life, and upon their success in which must materially depend their respectability, their happiness and their worth to society. Husbandry is a business in which there is always something to learn, even in the longest term of life. The sooner the study is began, the more proficiency will be made; and the more one becomes acquainted with its varied sources of true enjoyment, the stronger is his attachment to its pursuits.—*Cultivator.*

Maternal Attachment.—A celebrated Preacher, named Bucholz, who resided at Hasmark, in Hungary, had occasion to go to the village of Emperies, distant about twenty English miles from his own place of abode. He travelled on foot, and took with him a small terrier slut, then in the last week of her pregnancy. After having been detained several days at Emperies by floods, he was compelled to return home without his dog, which in the mean time had brought forth a litter of five puppies. He had not been in the house an hour, when, to his surprise, the slut came in bearing a puppy in her mouth, which she carefully placed upon the mat where she ordinarily lay, and immediately rushed out of the house again on the road to Emperies. In the space of twenty-four hours, she went and returned four times more, on each occasion bringing home a puppy in her mouth. It is hardly necessary to state that the puppies were quite dead as the mother brought them into the house. As the poor creature laid the last puppy upon the mat, she could scarcely stand for weariness; whined and trembled, looking upon her dead puppies, and after walking once or twice round the mat, she laid herself down beside them and died in a few minutes. In 24 hours the animal had run about 180miles.

The Temperance Cause.—Since 1826, more than 5000 temperance socteties have been formed in the United States, embracing 1,000,000 of members, many of them persons of the first respectability for character, talents and influence.

CONTENTS OF THIS NUMBER.

A card to subscribers—Prolific Lima bean—Guinea corn—The farmer—Education of the stomach—Irish Fortune—Mason's and Dixon's line—Dale's new hybrid turnip—Chenopodium quinoa and the potato—Youatt's lectures on diseases of stock—To scatter swellings on cattle and horses—On the cultivation of celery—February to farmers and gardeners—Culture of silk—Agricultural instruction in primary schools—Maternal attachment—The temperance cause—Prices current—Advertisements.

BALTIMORE PRODUCE MARKET.

☞ *These Prices are carefully corrected every* MONDAY.

	PER.	FROM	TO
BEANS, white field,	bushel.	2 00	2 50
CATTLE, on the hoof,	100lbs.	5 50	6 00
Slaughtered,	"	3 00	4 00
CORN, yellow,	bushel.	63	64
White,	"	60	——
COTTON, Virginia,	pound.	12	17½
North Carolina,	"	14	16
Upland,	"	17	18½
FEATHERS,	pound.	35	37
FLAXSEED,	bushel.	1 62	1 75
FLOUR—Best white wheat family,	barrel.	6 00	6 50
Do. do. baker's	"	5 50	6 00
Do. do. Superfine,	"	4 75	5 00
Super Howard street,	"	4 62	4 75
" " wagon price,	"	4 56	4 62
City Mills, extra,	"	4 87	5 00
Do.	"	4 70	——
Susquehanna,	"	——	——
Rye,	"	——	——
GRASS SEEDS, red Clover,	bushel.	5 00	5 50
Timothy (herds of the north)	"	2 50	3 50
Orchard,	"	3 00	——
Tall meadow Oat,	"	2 00	2 50
Herds, or red top,	"	1 25	——
HAY, in bulk,	ton.	16 00	——
HEMP, country, dew rotted,	pound.	6	7
" water rotted,	"	7	8
HOGS, on the hoof,	100lb.	5 75	6 50
Slaughtered,	"	——	——
HOPS—first sort,	pound.	15	——
second,	"	13	——
refuse,	"	11	——
LIME,	bushel.	30	33
MUSTARD SEED, Domestic,	"	5 00	6 00
OATS,	"	30	33
PEAS, red eye,	bushel.	——	——
Black eye,	"	87	1 00
Lady,	"	100	——
PLASTER PARIS, in the stone,	ton.	3 00	——
Ground,	barrel.	1 37	——
PALMA CHRISTA BEAN,	bushel.	1 50	1 56
RAGS,	pound.	3	4
RYE,	bushel.	62	65
TOBACCO, crop, common,	100 lbs	4 25	5 00
" brown and red,	"	5 00	7 00
" fine red,	"	7 00	9 00
" wrappery, suitable for segars,	"	6 00	12 00
" yellow and red,	"	8 00	12 00
" yellow,	"	9 00	12 00
" fine yellow,	"	12 00	16 00
Seconds, as in quality,	"	4 00	5 00
" ground leaf,	"	5 00	9 00
Virginia,	"	5 00	10 00
Rappahannock,	"	——	——
Kentucky,	"	6 00	9 00
WHEAT, white,	bushel.	1 05	1 10
Red,	"	1 00	——
WHISKEY, 1st pf. in bbls.	gallon.	28½	29½
" in hhds.	"	28	——
" wagon price,	"	24½	25
WAGON FREIGHTS, to Pittsburgh,	100 lbs	——	1 50
To Wheeling,	"	——	1 75
		washed.	*unwash*
WOOL, Prime & Saxon Fleeces,	pound.	50 *to* 60	24 *to* 26
Full Merino,	"	44 50	22 24
Three fourths Merino,	"	37 44	22 24
One half do.	"	33 37	22 24
Common & one fourth Meri.	"	30 33	20 22
Pulled,	"	31 33	22 24

A FINE BULL.

FOR SALE, a young Bull, ten months old, sired by the thorough bred bull Apollo, (of the Gloster Stock) and out of a very fine cow of seven-eighths Durham S. H. blood, consequently fifteen-six teenths Durham S. H., is for sale a bargain if immediate application be made; he is truly a splendid calf, and will be sold for $100 cash. Apply to I. I. HITCHCOCK,
jan 13 American Farmer Establishment.

BALTIMORE PROVISION MARKET.

	PER.	FROM.	TO.
APPLES,	barrel.	$3 00	$5 00
BACON, hams, new,	pound.	11	——
Shoulders,	"	8	9
Middlings,	"	——	——
BUTTER, printed, in lbs. & half lbs.	"	25	37
Roll,	"	15	25
CIDER,	barrel.	——	——
CALVES, three to six weeks old	each.	3 00	6 00
COWS, new milch,	"	17 00	30 00
Dry,	"	6 00	10 00
CORN MEAL, for family use,	100lbs.	1 50	——
CHOP RYE,	"	1 50	——
EGGS,	dozen.	19	20
FISH, Shad, salted,	barrel.	5 75	6 00
Herrings, salted, No. 1,	"	4 75	——
Mackerel, No. 1, 2 & 3,	"	5 12	7 00
Cod, salted,	cwt.	2 50	3 00
LAMBS, alive,	each.	1 25	2 00
Slaughtered,	quart'r	31	50
LARD,	pound.	8	9
ONIONS,	bushel.	62	75
POULTRY, Fowls,	dozen.	1 50	2 25
Ducks,	"	——	2 50
POTATOES, Irish,	bushel.	40	62
Sweet,	"	——	——
TURNIPS,	"	37	50
VEAL, fore quarters,	pound.	3½	4
Hind do.	"	6¼	——

ADVERTISEMENTS

CLOVER SEED AND SEED OATS.

350 bush. Clover Seed
2500 do Seed Oats, for sale in lots to suit purchasers, by
feb 17 4t LUTHER J. COX, Corner Calvert and Pratt st.

A VALUABLE JACK.

FOR SALE—A first rate Maltese Jack, about 10 years old, exactly 14 hands high, and one of the quickest performers and surest foal-getters ever known in this country; having been several years imported and his character thoroughly proved by his stock, which is of the first quality.

Several fine Jacks have been sold in this state at from 800 to 1000 dollars. The one now offered is certainly not inferior to the best of these, and will be delivered in Baltimore for $500 cash, and for no other reason than that his owner is not sufficiently encouraged to keep him where he now is. Address I. I. HITCHCOCK,
feb 17 Baltimore.

BULBOUS ROOTS.

HYACINTHS, Tulips and a general assortment of Bulbous Roots, suitable for the present season, for sale low at this establishment by
Oct. 28. I. I. HITCHCOCK.

AMERICAN FARMER ESTABLISHMENT,

No. 16 S. Calvert street, Baltimore, Md.

COMPRISING a Stock and Experimental Farm; a Nursery and Seed and Flower Garden; a Store for the sale of Field and Garden Seeds and Agricultural Implements and Books; a general Agricultural and Horticultural Agency; the Publication Office of the "Farmer & Gardener, and Live Stock Breeder & Manager," and of "Hints to Farmers;" and an Office of APPLICATION for Farmers, Gardeners, Overseers, Managers, &c.

I. IRVINE HITCHCOCK, *Proprietor.*

This establishment is now in full and successful operation, nearly every department, especially that of seeds, being well supplied with articles of the most desirable quality.

Orders by wholesale or retail will be promptly executed on terms that cannot fail to give entire satisfaction to purchasers.

As the limits of an ordinary advertisement preclude the possibility of conveying an adequate idea of the variety and the value to the cultivator and dealer in seeds, of the contents of this establishment, a comprehensive and descriptive PROSPECTUS AND CATALOGUE has been printed and will be sent gratis to any gentleman who will transmit to the proprietor' address (post paid) for that purpose.

BROOD MARE FOR SALE

FOR SALE a first rate coal black Brood Mare—terms moderate. Apply to ROBT. SINCLAIR, Jr.
Feb. 10. at Sinclair & Moore's.

BENE SEED.

JUST RECEIVED at this Establishment, and for sale, by the pound or in 12½ cent papers, a small quantity of the seed of this most valuable plant. It is very efficacious in the Bowel Complaints of children, and not difficult to be administered. The seed should be planted in April, in hills like beans, and the leaves will be in perfection in June. Two or three leaves being put into a tumbler of spring water, for 10 or 15 minutes, convert it into a mucilage, which being tasteless, children readily drink.
Feb. 3.

SUPERIOR CATTLE FOR SALE,

OF the Devon, and Devon & Short Horn blood, at Brookland Wood Farm, the residence of Richard Caton, ten miles from Baltimore, on the Susquehanna Rail Road, and on the Falls Turnpike Road, consisting of

Devon Bulls, Heifers and Calves, of all ages of each denomination, from 8 months to 4 years—price, forty to one hundred dollars each, according to age and quality.

Devon and Durham Bulls, the offspring of Devon Cows, by the Short Horn Durham Bull Tecumseh. It is supposed by those persons in England who have dairies of this species, that they will be found superior to all others, uniting the beauty of form, hardiness of constitution, propensity to fatten, and richness of milk appertaining to the Devon blood, and product of milk of the Durham—price, forty to one hundred dollars. Apply to
Feb. 3, 1835. THOMAS BEVAN, Manager.

GOOSEBERRY TREES.

THE subscribers have just received from England, in fine order, 500 Gooseberry, of two and three years growth, raised with single stem, consisting of twenty of the best and largest varieties of the usual assorted colors, regularly named, and as they were obtained from a very respectable nursery, immediately in the neighborhood, where the largest and best Gooseberries are raised, we have no doubt of their being a very superior parcel; price per tree 31¼ cents, or $3 per dozen. Also, by the same vessel, 500 each European Lime or Linden and Larch Trees, 3 to 4 feet high, all which are planted in our Nursery, where we have a large stock of Nursery articles, of which we name the following: Of the Ornamental Trees, Chinese Ailoanihus, or Tree of Heaven, Silver leaved Maple, Sugar Tree, and the European Linden or Lime Trees, all from 8 to 12 feet high, well suited for planting in steets, &c. Of Shrubs, we have the Europran and India Roses Current, Gooseberry and Strawberry, of all the best varieties; also Apple, Pear, Plumb, Peach, Apricot, Nectarine, Quince, English Walnut, and the deservedly celebrated Catawba, and other Grape plants of two years old, by the hundred, dozen or single plant, and as we cultivate the largest proportion of the Catawba, we can dispose of cuttings of that kind low, by the thousand, provided orders are received by trimming time. Thorn Quick Pyrocanthea and Honey Locust, for hedges: Asparagus, Hop and tart Rhubarb roots, Flowering Vines, and an extensive assortment of superb double Dahlias. For prices and other useful particulars, see our Catalogue, to be had gratis at the Nursery, or at the Store, Light street, near Pratt street, Baltimore, where orders will be promptly and carefully attended to. SINCLAIR & MOORE.
Feb. 3, 1835.

MORUS MULTICAULIS.

THE subscriber has on hand a few hundred of this celebrated Tree, unrivalled in the quality of its leaves as food for the silk worm, for which he is ready to receive orders (accompanied by the cash) with *particular* directions for the delivery of the trees on or after the first of Nov. next. Price 50 cents each, $5 per dozen, or $40 per hundred.

The success and ease with which this tree is propagated, the extraordinary quickness of its growth, the superiority of its leaves over *all* others for the silk culture, and its uncommon luxuriance and beauty, altogether recommend it to the favourable notice of *every farmer* as a most valuable acquisition. I. I. HITCHCOCK,
aug. 26 Amer. Far. Estab.

THE FARMER & GARDENER;

AND LIVE-STOCK BREEDER & MANAGER.

CONDUCTED BY I. IRVINE HITCHCOCK, AND ISSUED EVERY TUESDAY FROM THE AMERICAN FARMER ESTABLISHMENT, AT $5 PER ANNUM, IN ADVANCE

No. 43. **BALTIMORE, FEBRUARY 24, 1835.** **Vol. I**

☞This publication is the *successor* of the late

AMERICAN FARMER,

(which is discontinued,) and is published at the same office, at five dollars per year, payable in advance.

☞When this is done, 50 cents worth of any kind of seeds on hand will be delivered or sent to the order of the subscriber with his receipt.

American Farmer Establishment.

BALTIMORE: TUESDAY, FEBRUARY 24, 1835.

THE MORAL REFORMER, *and Teacher of the Human Constitution.*—The above is the title of a periodical which has been recently commenced in Boston by Dr. Alcott. The Doctor seems awake to the importance of teaching young people to know themselves—a branch of knowledge which as relates to the human constitution has hitherto been totally neglected in the routine of studies for all others than Physicians; and he intends to remedy this defect by furnishing *such parts* of this knowledge as may with propriety be given to young persons. We approve most cordially of his design and also of his work, so far as we have yet seen it, and earnestly recommend it the patronage of all thinking people who have the care of children and youth either as parents or teachers. The work is published in pamphlet form once a month, and charged at only *one dollar* a year. Address Dr. Wm. A. Alcott, Boston, Mass.

We extract this week the Doctor's Epitaph, prepared for the Monument of the last individual of our species, which is assumed to have become extinct by blind and obstinate perseverance, from generation to generation, for about five hundred years, in that most absurd of all customs, tight lacing.

VEGETABLE SILK.—There is, at present, considerable activity in a new branch of industry at Paris. We allude to the manufacture of carpets and various other articles of general use, from a substance first imported into France by M. Pavy, to which he has given the name vegetable silk.—This substance has, in effect, an appearance very similar to that of silk, and can be employed as its substitute in a variety of cases. It is white, and will receive dye of any color. This vegetable is gathered in shoots of from fifteen to twenty feet in length, and is of such strength, that four of these shoots plaited together will bear a weight of forty pounds.—*Southern Planter.*

SPLENDID BOUQUET.—The Messrs. Winship exhibited at the Horticultural Rooms on Saturday morning, says the Boston Transcript, one of the most elegant bouquets that has rejoiced our sight for a long season. It was composed of twenty-eight varieties of beautiful flowers now in bloom at their conservatory. We may specify among the choicest, Aloe variegata, Aloe radula, Clerodendrum fragrans, Metrosideros lanceolata, Calla ethiopica, Bletia hyacinthia, Iris chinesis, Justitia cerulea, Pelargonium comptum, and Rivena humilis. It was delightful to look on such an evidence of the riches of our Green Houses, and the increasing fondness for the cultivation of plants, the most innocent recreation ever indulged in by man or woman.

CHARLOTTE COURT HOUSE, (VA.)
Feb. 13th, 1835.

To the Editor of the Farmer and Gardener:—

SIR,—Above is a list of seeds, roots and trees, which I will thank you to send me, carefully labelled. I wish also to get a pair of the Norfolk thin rined pigs. I will thank you to give a particular description of the best plan for erecting suitable styes, shelters, &c. for feeding, raising and fattening hogs, by which I can have the work executed. The raising of hogs in this part of Virginia has become difficult and of doubtful propriety with many of our planters, and many of them rely on the west for their pork. Having fallen into the custom of my neighbours, I purchased the larger part of my pork for the last two or three years—and having satisfied myself from the little experience I have made, that it is not our true interest, have determined to get some of the best breed of hogs known, and feed better than we have heretofore done. I have a pair of the Parkinson, or Bedford hogs, and am much pleased with them.

Your particular attention in procuring for me not only the pure breed, but a fine pair of the Norfolk thin rined pigs, will much oblige,

Yours, respectfully,
JAS. P. MARSHALL.

[We have more than one application for the plan of hog pens, &c. and we beg the assistance of experienced feeders in furnishing them.—ED.]

AGRICULTURE IN JAPAN.—The last London Quarterly contains a review of two recent publications, on the Empire of Japan. From that article we extract a few paragraphs, relating to the skill of the Japanese in the culture of the earth. The Quarterly thus sketches the chief physical and political features of Japan.

"The most important feature of the social polity of Japan, as of the oriental nations generally, is the hereditary nature of all employments, avocations, and situations in life. This deep-seated custom is the great obstacle to improvement, it being the cause, in the language of the Reviewer, of the 'absence of most of those incentives of ambition which form the life-blood of European society.'

"The population of Japan is divided into eight classes:—1, The reigning princes or governors. 2, The nobility. 3, The priests. 4, The military. 5, The civil officers. 6, The traders. 7, The hand-craftsmen. 8, The laborers. The Japanese are believed to excel all oriental nations, in the arts of agriculture and manufacture. They are distinguished as gardeners and florists. They possess the singular art, unknown in Europe and America, of producing miniature samples of the largest products of vegetation. Mr. Meylan speaks of having seen a box offered for sale to the Dutch Governor, three inches long by one wide, in which were flourishing a fir tree, a bamboo, and a palm tree, the latter in blossom. The price asked for the box was about five hundred dollars.

"A country, for whose natural features Mr. Fisher finds his nearest European comparison in the Maggiores, Comos, and Luganos of northern Italy—cultivated like a garden to the summit of its hills; a climate under which the principal productions of the tropics grow side by side with those of southern Europe; a territory indented by seas, and intersected by lakes and rivers, swarming with every animal production of the water; a soil on which the raddish attains the Brobdignag weight of sixty pounds, and the blossom of the plum expands to the size of an English cabbage rose—and all this tenanted by thirty-four millions of people, living under a despotism, and that despotism not the will of an individual, but the fiat of rigid but steadfast, severe but immutable law, which, for at least two centuries past, has kept the community as free from civil dissension as from foreign invasion:—such is the picture presented to us by the most recent visiters to the shores of these *fortunate islands.* Do they not deserve the name, and ought even we, in the pride of our hearts, to spurn the fanciful parallel which some writers have drawn between Japan and Great Britain?"

See to your fences this month, that you may not be delayed when spring work comes on.

THE FARMER.

GAMA GRASS.

A writer in the "Columbus (Ga.) Sentinel," gives the following account of this valuable grass, as it is.

"In some of the last numbers of your valuable paper, an inquiry was made as to the success of the culture of the Gama Grass—and a request that those who had tried it would give the result of their experience, and their opinions. So far as my own extends, I can say but little, not having given it a fair trial—being deficient both in quantity and time. I procured last winter a few seed from Dr. Bartlett, the former able conductor of the "S. Planter," and planted them in a rich bottom soil: only about half a dozen seed came up, owing I presume to my planting them too deep, together with the wet spring, which caused them to rot, and many of the seed being, no doubt, without substance in them, as I have since learned that only those seed which are dark colored will come up, the light or straw colored being entirely without germinating substance. Those which did come up, grew off well and flourished finely—some of the bunches having from seventy to a hundred branches and growing up as tall as my knee. I did not cut it and the cold winter has only killed the blades a little more than half way—there were no stalks, as it does not seed the first year—the blade is from half an inch to three quarters wide.

As I can say but little with regard to my own experience in the cultivation of this important grass, I have it in my power, and authority to communicate the experience and opinions of a gentleman who has made a very fair trial with the article, and he gives it all the praise which has heretofore been bestowed on it.

On my return home from Morgan county, in December last, I called at Mr. Elijah Phillips' of Monroe county, whose standing is well known to the community around him and no doubt to yourselves, as a most excellent and experienced farmer. On the farm of this gentleman I found an abundance of the Gama Grass in cultivation.—By request Mr. Phillips readily gave me his opinion of it, which I noted down at the time. He does not hesitate in saying it is a most superior article, and decidedly preferable to any other grass which he has ever seen, remarkably productive and very nutricious; his horses and cattle are extremely fond of it; indeed, preferring it to fodder, which contains much less nourishment than the grass; it cures readily and retains a sweet odour. It will grow in any soil wet or dry, but the most luxuriant which he had in cultivation this year, is about an acre on the bluff of the river —it flourishes extremely well on hills and marshy grounds, particularly in what is called Crawfish low grounds, drained well.

He prefers planting it in hills of the distance of two feet each way—the hill to be made large, broad and light, after which it requires but little or no cultivation; one or two handfuls of cotton seed deposited in the hill and mixed with the soil, he found to produce a fine effect. A branch of the grass will be set in the centre of the hill, or one or two good seed, and those only of a dark color are good and sound—when the plant comes up (which you will know from its resemblance to young wheat, just out of the ground,) you have little more to do—keep the grass and weeds from growing too large around it, and give it one or two light ploughings during the year.

He has never seen any article of cultivation improve the land on which it is growing, faster than the Gama Grass, although it has a most powerful root, but the bunches are in proportion to the roots, branching numerously and spreading wide. Mr. Phillips, is of opinion it can be cut monthly as long as the season would allow—he made three cuttings the last summer, and he does not think the bunches lost a *half pound* each, the second cutting; and he was certain there was not *two pounds* difference in the branches between the first and third cutting. He weighed several bunches which averaged from twenty to thirty seven pounds each; and he has no doubt there were several of the largest bunches he let stand for seed, which would weigh *thirty pounds* each; in fact he had never seen such production in his life. But let us make the calculation even at fifteen pounds to the bundle or hill, and allow a loss of half for curing, which will leave seven pounds of cured hay—allowing then fifteen hundred hills to the acre, (which is not enough by fifty five hills,) and you will procure *ten thousand five hundred pounds* of good hay from *one acre* at one *cutting*, and if you make three cuttings and allow fifteen hundred pounds for losing, you have the nett amount of *thirty thousand pounds* of good hay, from *one acre* of ground, in *one year*—gray land will always suit it best, and I believe it will make but little difference whether it be planted on hill sides, level, or low grounds, so that it is not red and stiff or too wet: and if the land is poor, it will soon make it rich.

Mr. Phillips has four other kinds of grass besides the Gama: the Feather Top or Velvet Grass, the Crow Foot, which he considers a superior grazing grass, the Red Top which he values next to the Gama for hay, and the Blue Grass.—He was kind enough to give me a half pint of the Gama Grass seed, a few of which, I will give to any gentleman who wishes to make a trial of it.

Respectfully, yours &c.

EDWARD DELONY.

Talbotton, Ga. Jan. 15th, 1835.

[From the Genesee Farmer.]

On Draught.

(Continued from page 323.)

In my last number, I alluded to *power*, in the abstract, and made some suggestions in relation to the difference between animal and mechanical power. Leaving the subject of mechanical power, as I then proposed, I shall now proceed to consider the *application of animal power;* and in so doing, shall have reference principally to the power and use of the horse, whose services are in constant requisition, and whose powers are familiar to us all.

The application of the power of a horse, in the ordinary occupations of life, would seem to be a very simple matter, as it really is, and hardly worth a minute investigation; and yet we shall find as we progress, that the result of every animal effort, must depend upon a vast variety of principles and circumstances, connected with the exertion made.

Upon the *structure* of the animal, much may depend, as I had occasion to notice when treating upon the Horse in vol. 2. Every animal is a beautiful piece of mechanism, made up of exquisitely fine wrought pullies and levers, which are forced into vigorous action at every exertion of power. A horse, from the very nature of his formation, is peculiarly calculated for *draught.*—To exemplify this, let us consider for a moment, the difference in applying the power of a man and a horse. The process of dragging is produced by throwing the body forward, and making its weight available as well as its strength, thus making the feet, the fulcrum of a lever, and the weight and strength the effective power. The centre of gravity in both animals is about the centre of the body, to wit, just behind the shoulders in the horse, and just below the arms in the man. Now supposing the weight and strength of both animals to be the same, the fact, that the hind legs of the horse must be considered the fulcrum, necessarily throws the centre of gravity much further forward in the horse, than it could possibly be done by the man. Consequently the effect produced, must be in proportion to the weight of the body and the distance the weight is applied beyond the fulcrum. This is constantly the case in practice. The muscular strength of a man is nearly as great as that of a horse, but from his upright construction, he cannot apply it in the same way. He can carry a great weight up a ladder, if applied to his shoulders, and yet in the act of pulling, his power is lost, for the want of weight, and its proper application. The horse too, in ascending a steep hill, can produce very little effect, because in that case, his whole muscular strength must be exerted against his own gravity and that of the load; while on a horizontal surface, he is enabled to take advantage of his great weight, as well as muscular powers.

Now although the weight of a horse may remain the same, and be applied under most circumstances, with the same effect, not so with the muscles. A constant strain upon them, will soon destroy their power of action, and render the animal useless. We are all aware of this from experience,—thus we feel more fatigue by standing than by walking, because one particular set of muscles is then kept constantly exerted. We must therefore vary the resistance, so as to suit the power and gait of the animal. But in varying the resistance, it cannot be elastic or yielding, except at the expense of power; for in that case, if too much power should be applied, the horse would naturally fall forward, and thereby lose his exertion; and if the power should be insufficient he would be drawn back by the strain, and it would require a greater effort to restore the motion. This is constantly exemplified in towing canal boats, and in the lead horses of stage coach teams. In the former case, the length and curve of the rope give an elasticity to the strain; and the necessity of keeping the rope out of the water, compels the animal to keep up an unremitted pull in an oblique direction. So in harnessing horses one before another, the leader by tightning the traces is constantly relieving the strain from the wheel horse, and the wheel horse from the leader,

so that these horses labor under all the disadvantages of a long, elastic and constantly yielding load, which is not only fatiguing, but prevents their united exertion upon the carriage. A horse therefore to work to advantage, must have a rigid resistance, but neither uniform, nor without remission. Hence we readily perceive, why a horse works easier on an undulating road, than upon a perfectly level one, and also why he will draw more, when attached directly to his load, than when at a distance.

The *effect* gained by the action of a horse, or in other words his *productive muscular power*, must depend upon his *rate of speed*, the *power of traction he can exert*, and the *number of hours he can work*. As these are important considerations, connected with the *application of animal power*, it is desirable to examine them more in detail, and with that view, I shall avail myself, as heretofore, of the statements and calculations of Mr. Tredgold and others.

Neither the speed or power of a horse can be of any avail, unless some useful effect is produced, over and above mere velocity. Now the *limit* of *speed* in any horse, is the distance he can accomplish in a given time, for several days in succession, without weight; and the limit of his power, is when the weight can scarcely be moved. The medium point between these two limits, is evidently the one most advantageous for the application of his power. This medium is said to be, half the extreme or limit of velocity of a horse working unloaded; and the force of traction, half the limit of his power. For instance, if six hours be the length of a day's work decided upon, and if a horse working that time can go six miles per hour unloaded, and therefore producing no useful effect, and supposing the limit of power of the same horse equal to 250 lbs., it is found that he will do the most work in the same number of hours, when drawing a load at the rate of half six, or three miles per hour; and half of 250 lbs. or 125 lbs., will be the strain correspoding to this speed. As the *limit of velocity* depends upon the time the speed is kept up, the following table, drawn from experiments, will show the proportion of duration of labor, and maximum of velocity of the average of horses:

	Hours.								
Duration of labor,	1	2	3	4	5	6	7	8	10
Velocity in miles per hour unloaded,	14¾	10½	8½	7½	6⅔	6	5½	5¼	4⅔

This evidently shows the advantage of reducing the speed, and prolonging the exertion. It will here also be seen, that the velocity of horses corresponding to eight hours' work, is five miles and a quarter per hour, and consequently the rate at which he would travel when loaded is but little more than 2½ miles per hour. But Mr. Tredgold estimates, from long experience, the time in which the average of horses can accomplish most work without injury to themselves, to be only six hours per day, instead of eight, which will of course increase his average velocity when loaded, to three miles per hour.

But we cannot always control the velocity and time of duration, as here supposed, for our stage coaches and other conveyances for passengers, have reference only to speed, and the great object of proprietors is to obtain it with the greatest economy. Mr. Tredgold has given a table which shows at once the reduction of effect by increasing the velocity. A force of traction of 125 lbs. continued for six hours at the rate of three miles per hour is taken as the standard, and considered equal to the arbitrary number, 1,000. The first column will show the velocity or rate per hour, continued for six hours per day; the second represents the force of traction of which the animal is capable; and the third, the comparative effects produced.

Miles per hour.	Force of traction in lbs.	Effect produced.
2	166	888
3	125	1,000
3½	104	972
4	83	888
4½	62½	750
5	41⅔	555
5⅛	36½	500

If however, the hours of labor be lessened, taking the velocity corresponding to the greatest useful effect, the results will be much greater, and the velocity may be raised much higher, as will be seen in the following table.

Here the first column is the length of day's work; the second, the velocity corresponding to that time, or half the limit of velocity shown in table first, and the third column, the comparative effect produced, the force of traction being in each case 125 lbs.

Duration of labor in hours.	Velocity, miles per hour.	Effect produced.
2	5¼	578
3	4¾	709
4	3⅞	813
5	3¼	909
6	3	1,000
7	2¾	1,063
8	2⅝	1,110

To attain higher velocity, it is necessary still further to reduce the load; and the following table is calculated upon the supposition of the strain being only one half the last, viz. 62½ lbs.; this is about the average exertion of each horse in a four horse heavy stage coach.

Duration of labor, hours per day.	Velocity.	Effect produced.
4	5½	613
3	6⅖	534
2	7⅘	435
1	11	307

In mail or light coaches, where ten, eleven, or twelve miles an hour is attained, the average strain of each horse is barely 40 lbs., and the effect produced, not much more than one half the above, or 160.

These tables are calculated upon the supposition that the roads are good and the resistance small, and therefore allowance must always be made when roads are uneven, for increased resistance, and a corresponding expense of power. It will be observed, too, that in rapid travelling the power is much more expensive, owing to the great loss sustained by increased velocity; and the bad consequences of a uniform strain, is more severely felt by the horses, and therefore occasional relief much more urgent.

From all that has here been stated, it will readily be seen, how important it is to all persons engaged in transporting property to understand fully the principles which regulate the increase or diminution of *effect* produced by their teams, and no persons have a greater interest in this subject than farmers. Their great object, with others, is to obtain the greatest amount of effect, with the least expenditure of power. Let every man then, investigate this subject for himself, that he may know when and how he is obtaining the greatest possible effect, from the expense and power applied. QUERCUS.

THE FARMER.—There is not a more independent being in existence than the farmer. The *real* farmer; he who attends strictly to the duties of his profession; who keeps every thing about him snug and tidy, and who seeks every opportunity to introduce such improvements of the day as will tend to add beauty and worth to his farm. Such a farmer is always happy and independent, and he lives as it were in a little world of his own with nothing to trouble him, save the cares of his farm, which by the way are considered rather as pleasures than otherwise. His mind is always at ease, and the duties of his calling are performed with a good degree of pleasure. When the toils of the day are over and the 'night cometh,' he takes his seat at the domestic fireside and whiles away the evening in sweet converse with his little family circle. The toils of the day have been perhaps rather arduous—but what of that? They are drowned and forgotten in the pleasures of the evening. And then, he feels a sincere pleasure on reflection, that while he rests from his labors his business continues to flourish. His crops are growing and preparing for harvest; his cattle, &c. are fattening ready for the market, and every thing prospers. With such thoughts as these, he can calmly resign himself to the night's repose and rise on the morrow with the returning sun, refreshed and prepared for the duties of another day. —*Intelligencer & Mowhawk Adv.*

Majandie, a French physician, has lately published a treatise on the powers of the lungs for absorbing poisonous substances and medicines. The colleges hitherto have, in general, denied that the influence of medicine could be carried into the system through the medium of the lungs. Majandie's object is to prove that it can be, both more powerfully and rapidly, than by the bowels. If the French physician be correct, the medicated vapor bath will become a powerful engine in the hands of our faculty.—*N. Y. Star.*

CURIOUS COINCIDENCES.—Aaron and Robert Fay, two brothers, who lived in the town of S, in the county of Worcester, and who died near the close of the last century, had each born to him *twenty* children; each brother had *two* wives, each wife of each husband had ten children, and each of the four wives had *seven* sons and *three* daughters. One fact more: *one* of each family only survive, and that one, in both cases, the youngest born.

Never quit certainty for hope.

THE BREEDER & MANAGER.

Management of Calves.

The Management of Calves is a matter of interest with the dairy farmer. The object is to fatten or rear calves in a healthful condition with the least possible expense to the dairy. We find in an article upon this subject, in the Edingburgh Quarterly Journal of Agriculture, written by Mr. Aiton, some remarks which are new to us, and which we believe,will be useful the to dairy patrons of the Cultivator. In fattening calves for the butcher, the dairymen of Strathaven, whose practice Mr. A. describes, consider it most profitable to feed them from four to six weeks, at which age they are made to bring from £3 to £4. ($13 to $17.) Beyond this age they make but a bad return for their feed, and under it they are justly considered unfit for the market. The following is given as the Strathaven mode of feeding, and furnishes also the reasons for the practice:

"The calves are fed on milk only, with seldom any admixture; and they are not permitted to suck their dams, but are taught to drink their milk from a dish. As arguments are advanced for even the worst of practices, those who allow their calves to suck, say, that by so doing, a much greater portion of saliva is secreted, and carried with the milk into the stomach of the calf, where it promotes digestion, and accelerates the growth and fattening of the young animal. But although saliva is necessary to digestion, it can be drawn forth by placing an artificial teat in the mouth of the calf while feeding, and preventing the animal from drinking its milk too hastily, or giving it too cold. In the dairy districts of Scotland, the dairy-maid puts one of her fingers into the calves' mouths when they are feeding, and this, or any thing similar, serves the same purpose as the natural teat, in promoting the necessary secretion of the saliva. A piece of clean leather, about three inches long, and fixed to the bottom of the dish, will, when the milk is given slowly, so that the saliva may be drawn from the glands of the calf, and conveyed to the stomach with the milk, answer every purpose that sucking can serve, and still more saliva may be conveyed to the stomach of the calves. When they are not feeding, a lump of chalk is often laid within their reach, by licking which they are induced to swallow much saliva that would otherwise drop from their mouth and be lost. Calves frequently chew or suck anything that is within their reach, not for food, but to help them to swallow saliva, and on that account something lake a teat should be placed near them, that by sucking it they may promote the secretion of saliva, and convey it to their stomach.

"But though sucking the dam may be favorable to the calf, yet it seriously injures the cow. The calf cannot, when young, consume all the milk of a good cow, and she becomes so fond of her calf that she will not yield her milk to the dairy-maid; and unless the cow's udder is completely emptied of milk every time she is milked, the lactic secretion is gradually diminished, and the cow will ultimately run dry on that account; but when the milk is drawn from the cows and given by hand to the calves, every thing can be regularly corrected to the advantage of the cow, the calf, and the owner of both. And when calves are reared for stock, various substitutes for milk can be gradually introduced, and the milk slowly withdrawn, without injuring the stomach of the calf by a too sudden change of food. And when calves are to highly fed, the milk of two cows can be given them by hand-feeding, while cows will suckle none but their own calves.

"The whole secret of fattening calves for veal is to give them, after they are three or four weeks old, an abundance of milk, keep plenty of dry litter in their stalls, let them have the benefit of good air, moderate warmth, and be nearly in the dark, as they hurt themselves with sportiveness when exposed to too much light. In Holland, the best feeders keep their calves in pens or coops, in which they can stand or lie at pleasure, but cannot turn themselves round. I am not sure that such rigid confinement is beneficial.—It is necessary, however, to keep fat calves in places where they have but little light. They require to be fed twice every twenty-four hours.

"If a calf becomes *costive*, a small portion of bacon or mutton broth will give them ease; and if they begin to *purge*, a small quantity of rennet, used in coagulating milk, will cure that disease. The Scotch calves are never bled, nor infusions of linseed, oil-cake, or any other food given them, but pure milk from the cow."—*Cultivator.*

[From the Farmer's Register.]

Colic in Horses.

It is a source of consolation to sensitive minds to reflect that the diseases of the brute creation are few and simple in their nature: but at the same time it is mortifying to know that they are not considered sufficiently important to require the attention of men of science and ability. Too little attention is generally devoted to a proper acquaintance with these diseases, when their treatment properly belongs to every husbandman. If each farmer having a knowledge of an approved remedy for any disease would communicate it, the information would become as extensive as the Register is circulated—nor would I consider it too heavy a tax upon its columns. These truths being impressed upon my mind, I am disposed to follow the humble manner of some of your correspondents, and give a recipe I have always found singularly efficacious for colic in horses.

The causes of this disease are numerous—bad food, hard rides, constipated bowels, sudden transitions from heat to cold and the reverse, bots, and even customary food when the system is previously weakened by fatigue and overaction. To cure the disease produced from any of the foregoing causes, I generally administer an ounce of laudanum in a little water, which has invariably succeeded with me—but candor compels me to acknowledge my veterinary practice is not extensive; but I have used the above recipe successfully after the ineffectual administration of a variety of other remedies, which entitles it to further trial.

Its mode of operation may be explained upon philosophical principles. The various causes of the disease generally destroy the equilibrium of circulation and excitability. The blood flows from the surface of the body towards the point of diseased or weakened action, and congestion ensues in some part of the alimentary canal. So long as this congestion exists, so long must nervous irritation and spasmodic action, and consequently the suffering of the animal continue. But restore this altered circulation and derangement, and ease follows; a healthy and natural condition of the system immediately supervenes. Now no remedy promises so far to fulfil these healthy indications as laudanum. It is a powerful anti-irritant and diffusible stimulant, as well as spasmodic. The irritation being relieved by any remedy, the spasm relaxed, and a cure follows as surely as light drives away darkness. No danger need be apprehended from its early administration, but if fever and inflammation were to exist it would be certainly forbidden. This condition of the system requires bleeding, purging, and clystering; and frequently a use of cold water on the surface.

R. H.

Feeding Cattle in Winter.

The subjoined remarks, appropriate to the season, are from the New England Farmer:

There is no part of farm management, which requires more skill and attention than that of feeding cattle and other domestic animals. Regularity with regard as well to the time in which they receive their meals as to the quantity given at each meal is of great consequence. If cattle or swine miss their customary allowance they will pine and fret away their flesh at a rate, which a person unaccustomed to this branch of economy would not anticipate.

It is important that your store cattle, as well as those intended for the butcher, should be kept in a thriving state. Whether their progress in growth or fatness be slow or fast it should never be intermitted. If the animals remain stationary, you lose your time, and the interest of what they are worth. Nor is this all. By irregularity and inequality in feeding, you injure the health and constitution of your cattle, and in such a case, no management can make them profitable stock either for keeping on hand, or preparing for the butcher. Feeding cattle may be compared to rowing a boat against a current; if you miss a stroke or two, you not only cease to advance but are driven backwards. Three times a day, precisely at a certain hour, according to Mr. Lawrence, ought to be the regular allowance.

With regard to feeding cattle the proverb well applies, "There is that withholdeth more than is meet, but it tendeth to poverty." "Cattle," said Dr. Deane, "are more liable to be pinched with cold in December and January than afterwards. And no man knows how favorable the latter part of the season may be. Advantage also, in some cases, may be made of browsing in the latter more than in the former part of the winter, as the buds then begin to swell, and the twigs have not more sap in them than before."

"Neat cattle and horses (says the same writer,) should not have so much laid before them at once as will quite serve to fill them. The hay they have breathed on much they will not eat up clean unless they are very hungry. It is best, therefore, to fodder them twice at night, and twice in the morning. Let neat cattle as well as horses have both light and fresh air let in upon their fod-

der, and when the weather is not too cold or stormy, allow the windows to be opened. What one sort of cattle leave should be thrown to another sort. Those which chew the cud will eat the leavings of those which do not, and *vice versa*.

[From the Ohio Farmer.]

Scab in Sheep.—*Mr. Medary:*—I observe (going the rounds of the newspapers) a preparation of quicksilver, spirits of Turpentine and lard, recommended as a cure for scab in sheep. My own experience and observation authorizes me to think this preparation of very doubtful utility, if not deleterious—in fact it is no other than the Mercurial Ointment of our shops—(ungo intum caercileum) and is liable to many objections.

1st. It is expensive and troublesome to prepare. 2d. It can have no effect unless it enters the circulation and produces a partial salivation, and if the sheep be exposed to the wet or cold, while under the influence of mercury—they would be liable to take cold and be thrown into the rheumatism or other painful, if not fatal disorders.

A safer remedy will be found in the Hotch potch heretofore recommended in the Farmer, composed of gamboge, charcoal, saltpetre and oxygen of iron, if no fever.

This preparation, if fed twice a week to sheep, has uniformly removed the disorder and no Scab, Murrain or dropping of wool has occurred where it has been properly used.

MEDICUS.

Jan. 14, 1835.

The Pork of Brazil.—The Hogs in Brazil grow to an enormous size, and their fat supplies the whole country with nearly all the grease they use for their cooking. The mode of curing it, is this. The carcase is skinned, with all the fat adhering to it, which is sometimes two or three inches thick. It is then dry salted, and rolled up in bundles, and in that form sent to market wrapped up in baskets. It is sometimes brought on the backs of mules, more than a hundred miles, and in the street where it is sold by wholesole, it is to be seen in immense quantities. The purity of the atmosphere, preserves it for months in that state. It is an indispensable dish on every table, under the name of *tocinho*, and is generally free from rancidity. It is a complete substitute for lard, which is absolutely unsaleable, or at least was so in the year 1827.

Another standard every day dish in Brazil, is the *carne secca*, or jerked beef, which is the flesh of the wild cattle slain in the Provinces of Buenos Ayres, Monte Video, and Rio Grande, the most Southern Province of Brazil. The climate of that region is such as to permit the drying of beef in the sun, cut in thin slabs, and salted, and the export trade is carried on to an immense extent. —*Philad. Gaz.*

Costiveness—Mr. Hind and others, recommended *back raking* in case of costiveness in horses.—This is a disagreeable operation, and I believe perfectly useless, as the costiveness will certainly return and continue, and the operation have to be repeated until the cause is removed. Now I take Gamboge to be the proper medicine, to remove the cause, and the balls recommended heretofore, have uniformly produced a permanent relief; and I recommend it with confidence accordingly.—*Ohio Farmer.*

Chester county beef.—The Village (Pa.) Record, of Wednesday, contains a list of fat cattle weighed in the hayscales at Kennet Square, (and belonging to that and the adjoining townships) from the 25th December to the 1st February.—The list comprises forty head of cattle; the live weight of each is given separately; and there is not one of them which did not weigh upwards of 1750 pounds. The heaviest of them weighed 2303; and the general average of the 40, might probably be stated at from 1900 to 2000 pounds. Besides these, it was stated some time since, in the same paper, that Enoch Dixon, of Kennet, had raised six head of cattle, the heaviest of which weighed 2562 pounds. The enlightened agriculturalists of Chester County understand this branch of their business.

THE GARDENER.

[From the Horticultural Register.]

ON THE CULTURE OF ASPARAGUS.

There are several varieties of this valuable plant, and the common garden asparagus (*asparagus officinalis*) is cultivated extensively for the table. It grows best on a soil light and rich. If the use of the plant can be postponed for a year or two, it will be found most advantageous to raise it from the seed.

The following mode of culture has been successfully practised by experienced gardeners. Dig a trench two and a half feet wide and one foot deep. The bottom of this should be covered with good manure, well rotted, four inches thick. Upon that place a layer of loam four or five inches thick, upon which the roots are set six inches apart. Then cover the roots with good earth, and the succeeding fall spread horse manure over the bed. The following Spring uncover the surface with an iron rake and take off the manure and dig it with a dung fork. We know of an asparagus bed, which has been forty years established, and is as vigorous and productive now as it was five years after it was commenced.

Some gardeners affirm that asparagus should always be propagated by seeds. And that for the purpose of obtaining the best seeds, the most promising buds should be marked and tied to a stick, &c. But more of this hereafter. If sown to transplant, (according to Abercrombie,) one quart of seed will be requisite for a bed four feet and a half wide, and six feet long. If plants a year old are wanted for a plantation, then for a bed four feet and a half wide by thirty feet in length, to contain four rows of plants, nine inches distant in the row, one hundred and sixty plants will be requisite. The seed should be sown in April or May, in the same manner as onions, eighteen inches apart.

The following method of planting is recommended by Abercrombie: "Stretch a line lengthwise the bed, nine inches from the edge, and with a spade cut out a small trench about six inches deep, perpendicular, next to the line, turning the earth displaced along by the other side of the trench; and, having the plants ready, set a row along the trench, nine inches apart, with the crown of the roots two inches below the surface, drawing some earth, just to fix them as placed. Having planted one row, directly cover them fully with the earth of the trench, raking it back regularly an equal depth over the crown of the plants. Proceed then to open another trench a foot from the first: plant it as above, and in the same manner plant four rows in each bed. Then lightly raking the bed, length-wise, draw off any stones and hard clods, and dress the surface neat and even. Then let the edge be lined out in exact order, allowing three feet for each alley. But, sometimes, in planting large compartments of asparagus, a first trench having been made and the roots placed as above, then a second trench is opened; of which the earth is turned into the first over the plants. So proceed in planting the whole; making allowance between every four rows for an alley of three feet, more or less. It is of very great importance to take up the roots carefully and expose them to the air as little as possible before planting.

If you would raise asparagus directly from seed, without transplanting, you may sow two or three seeds in the places designated above for setting the plants, and cover them with an inch of good soil. When the plants are up they should be thinned to one in a place.

In a *Treatise on Gardening*, by J. Armstrong of Duchess, N. Y., it is directed to plant roots of *three* years old, instead of those of one or two years old, according to the usual practice. The author observes that "roots of three years will not only give fruit sooner than those of one or two years, but their fibres being harder, and roots more numerous, are better able to sustain the violence inseparable from transplantation, and the other accidents, (such as heating and chafing,) which often accompany it, particularly if the roots be brought from a distance.

Asparagus beds should be completely loosened to a moderate depth every Spring, as soon as the frost is out of the ground, with a proper fork, having three short tines, six to eight or nine inches long. But care must be taken not to go too deep, so as to wound the crown of the roots. The beds being loosened in every part to a moderate depth, should be raked over before the buds begin to advance. In Autumn, after the tops are turned white by frost, they should be cleared off, and a layer of dung, or rich soil an inch thick, laid over the bed. This should be done yearly, and the bed kept clean of weeds. If the bed should get too high by this management, the surface may be taken off with a spade early in the Spring to the depth of two inches, before the young shoots are in the way. But when this is done, a thin dress of rotten dung or compost should be laid on. This plant, according to *Deane's New England Farmer*, grows well in ground that is shaded. The sprouts will be very large and tender, but they will not be so early. It is not amiss to have one bed in a shady place to supply the table, after the season is over for cutting the first.

Cutting and gathering.—In new plantations be careful not to begin cutting till the stools have become mature in the third or fourth year.—

Likewise observe, both in old and new beds, to gather all the produce in a regular successive order, within the proper limits of the season. As the rising shoots project two, three, four or five inches at most, above the top of the ground, while the top bud remains close and plump, they are in the best condition for gathering. Cut them off, within the ground, with a sharp pointed knife, or small saw, nine inches long; thrusting the knife or saw down straight, close to each stool separately, cut it off slantingly, about three inches below the surface, with care not to injure the young buds, advancing below. Observe in a new plantation, in the first year's gathering, if the shoots come up of irregular sizes, to cut only some of the larger for a fortnight, or three or four weeks, and then permit the whole to run; but otherwise, when in strong production, gather all as they come, two or three times a week, or as required by the season till the 21st of June; then at furthest terminate the cutting, and permit the after shoots to run up the stalk till October. If from a particular inducement you cut later than the 21st of June, be careful to leave two or more shoots to each stool, in order to draw nourishment to it: for the stools left without growing shoots will perish; and by negligence in this respect, many unproductive spots are left in beds.

To save Asparagus Seed.—"Select some of the finest and earliest heads as they make their appearance in the Spring; tie them to stakes during the Summer, taking care not to drive the stake through the crown of the plants. In Autumn, when the berries are ripe, wash out the seeds, if for the market, or to be sent to a distance; but for home sowing, keep them in the berry till the time of sowing, the pulp being a great nourishment to the seed, which ought to be kept in a dry place through the winter."—*Hort. Trans.*

It is recommended never to cut down the stalks of asparagus in Autumn till the sap is gone out, and the stalks are dry and withered, because the vital juices return to the roots, and strengthen the plants for the next season.

Blanching Asparagus.—According to some writers, in Spain, Vienna, and some other parts of Europe, it is customary, in order "to give asparagus shoots growing in the open air as much length and tenderness as possible, there is inverted over each stem destined to be gathered, as soon as it shoots above ground, a wooden tube or pipe eighteen inches high, and one inch in diameter." Dr. Forbes on the same subject says, "in order to preserve the whiteness of the asparagus shoots they should be covered with a wooden or earthen pipe of twelve or fifteen inches in height, with a hole in the top."—*Hort. Trans.*

"We have no doubt but that asparagus is nearly as much the better for being bleached as sea-kale, which is said to be an asparaginous plant.—The sea-kale, according to Mr. Lowell, 'should be covered with pots or boxes in March, so as to exclude the light and to blanch it or make it white. If not blanched it is not so beautiful to the eye, or so tender and so delicate to the taste as if blanched.'"

Asparagus is found growing naturally on the borders of salt marshes, from which it was inferred that salt would be a good manure for that plant. Dr. Deane asserted that, "To a bed fifty feet by six, a bushel of salt may be safely applied before the plants start in the spring."

A writer for the *Genesee Farmer* recommends horn shavings and chips, to be dug into the ground as excellent manure for asparagus. The effect of this manure was scarcely perceptible till about three years after its application, when it enabled the cultivator "to cut daily large quantities of the finest asparagus *half an inch in diameter.* After the shavings began to decompose their effect was enormous."

It has been recommended, if the season be dry, to water asparagus beds with the drainings of a dung-hill, or leached manure, once or twice a week, the beds being somewhat hollow towards the centre, the better to retain the water or rain.

In a valuable paper, written by the Hon. John Welles, a method is described as the result of experience, by which the process of cultivating asparagus is greatly simplified. The following is an extract from the paper referred to.

"One of my predecessors, in about 1765, from a wish for the convenience of a good asparagus bed, as well as a strong impression of the difficulties of having a good one, set about it in earnest. By all report there was trenching or deep digging, paving with bricks at the bottom, and a laying of manure low down, and much more dug into the soil. This certainly became a good bed, and was always so considered.

"In about twenty-five years, or 1790, its decay was very observable, and it soon dwindled away to little or nothing.

"For some years the privation was submitted to. But in about 1800, a new bed was made with the same labor and expense, except the paving. This too proved a good bed. It lasted about the same time with the preceding, and some two or three years since was allowed to grow to grass.

"About twelve years ago while the last mentioned bed was in full bearing I was led to think that much of the trouble might be avoided in the process and preparations for its culture. A piece of ground was taken on the same farm, of a deep, rich soil. After a common corn crop was taken off, the land was ploughed and manured in the usual course. Holes were then dug twelve or fourteen inches in depth, and about the same distance apart, and two or three shovels of compost manure were mixed with a part of the earth. The roots of a year's growth were then inserted at about six inches in depth. This bed has flourished and has been thought productive as any whatever. At the same time with a view of a more full and fair course of experiments, I took a piece of land in another place of opposite character, being a thin light soil, and adopted a like course, and the result was equally favorable. The only difference to be noted was that the latter was more early in coming forward from the nature of the soil.

"However rare it may be that there is any over cultivation or preparation of the soil for any vegetable production, it would seem here to be the case. * * *

"If the bed from frequent weeding becomes low, it may be raised with dock mud to advantage.—This produces no weeds, while the saline particles are favorable to its growth."

We think this last suggestion of Mr. Welles will be very useful to cultivators, who reside near the sea-shore, and indeed all his observations are important.

Asparagus may be forced in hot beds by using three years old plants, which alone are suitable to that purpose. In this, set the plants at the distance of two inches. Mr. Armstrong observes that the mode of taking plants from hot beds "differs from that used for plants raised in the natural way. If you employ a knife you cannot fail to destroy many young plants, (on account of the closeness with which they stand to each other,) but the mode in which you do least mischief, is, to thrust your finger down along side of the bud, and break it off at the root." T. G. F.

MISCELLANEOUS.

Epitaph.

Here perished the last puny individual of a race of beings, originally made in the image of their Creator; and of course noble and godlike. Their lives were at first protracted a hundred years or more; and were not only long, but useful and happy. But though made 'upright,' they 'sought out many inventions,' some of which resulted in their ruin.

The length and happiness of their lives had been made dependent upon the free and rapid circulation of about three gallons (in an adult) of blood through every part of their bodies; and the preservation of this blood in a *pure state.* To preserve it in the latter condition, a set of organs, called lungs, had been placed in a large cavity in the upper part of the body, and things had been so contrived that by a process denominated breathing, these lungs were inflated with air twenty times or more a minute, and as often emptied; and when thus frequently filled with pure air, the effect was to remove such impurities of the blood, (which was constantly passing through them,) as this fluid had acquired in going the frequent round of every part of the system.

These lungs were contained in a large bony hollow or cavity, shaped somewhat like a sugar loaf; broad and capacious below, but smaller above. Although this cavity was surrounded by bones, it was easily compressible, especially about the bottom.

Now it so happened that after this race of beings had existed about 5700 years, the females, who constituted about half their whole number, undertook to *improve* their structure. They did not like the shape which the Creator had given them; it was ugly, they thought, and ungraceful. So they began to compress the cavity of the lungs about the bottom, and retain it in this shape. At first such an outrageous and impious procedure was not generally tolerated, and the practice was for a time set aside. But after repeated efforts, they at last succeeded, about the year of the world 5800; and the custom became general and permanent.

The first evil results were not so obvious. At least it was not quite obvious to the sufferer, that tight lacing was the cause; tho' her physicians told her so. They consisted chiefly in short and difficult breathing; greater liability to colds and obstructions in the system; coughs; cold extremities;

irregular appetite; bad digestion; languor; and a pale or leaden appearance. But as the bony cavity became permanently contracted at the bottom, like the mouth of a purse, all the other organs—the stomach, liver, and even the nerves, became affected. To the former complaints were now added dyspepsia, scrofula, hypochondria, consumption, and many more, tedious and difficult diseases. Not only was the body diseased; but through that the mind became affected. There was a law in their frames that if one member,—as the lungs—suffered, all the other members suffered with it, and also that if the body was injured, the mind and soul suffered sooner or later, in similar proportion. To pale, emaciated, sickly bodies, were now added feeble and debilitated minds, and sluggish or cold affections towards their fellows, and their Creator.—Not only was there a general nervousness, as it was sometimes called, irritability; but a downright fretfulness, peevishness, and impatience.

These evils were most general among a class or order of people called Christians; and so called because the name of their founder and leader was Christ. These persons professed to follow this leader's directions in all things, and those directions had been recorded after his decease in a Book. This taught that it was their duty to do *all* things in such a manner as would most promote the glory of God in the general good of the universe; and to preserve their bodies in the greatest possible degree of health and vigor for this purpose. If those bodies were thus duly taken care of, they were distinctly told that they might become residences or temples of the Holy Spirit.

In spite of all this, however, their bodies continued to be injured in the foregoing manner, and with the foregoing results. But the whole is not yet told. The evils having become permanent in the individuals of one generation, soon became so much a part of the general constitution that they were transmitted to others.

For the first 200 years of the history of this declension, the length of human life and the vigor of the race, did not seem materially altered, except in the case of those females who were immediate sufferers. The robust part of them, and the males generally, did not seem to be greatly degenerated. But in the next century, not only the one sex, but the other began to be slender and wasp-shaped; their size was greatly diminished, and their symmetry disturbed. Idiots of both sexes became greatly increased in number; monsters were more frequent; diseases, especially dyspepsia and consumption, became more common and fatal; and the whole race was now most evidently dwindling away. It was in vain that the teachers on soul and body,—among the Christians—had preached loud and long on the subject; such was the general devotion to the goddess Fashion that they had preached in vain; and now they had no lungs to preach with.

By the year 6200, the last of this beautiful and originally noble race of men—a solitary idiot—sank down with age and its decrepitude at thirty, and rose no more. The other races of men continued a little longer. The latest race to expire was the noble, but unfortunate Africans. But they, too, perished in the end. At last, the only remaining individual of their number, and the latest to dwell on the earth's surface, a feeble individual, not more than three feet in height, and differing from a wasp only in size, having breathed out her uncomfortable spirit on this spot—became a prey to a few wretched, famished dogs and vultures; for there were none to bury her.

This stone is erected on the spot where she expired, not in her remembrance, for she was too puny and ignoble to deserve notice; but in remembrance of man in general, once the proud inhabitant of this world, and its rightful and duly constituted lord.

SEASONABLE HINTS FOR FEBRUARY.

Wood which is wanted either for timber or fuel, should be cut in the present month if not already done. If left until the sap rises in the spring, its value will be greatly diminished, especially if intended for rails, posts, or other kinds of timber, as it is found that the durability depends greatly on its being cut when most free from sap. Timber cut early in the spring, soon becomes what is called *sap rotten;* but if cut only a few weeks later, when trees are in full leaf, it will remain sound in similar situations. Probably the best time, however, is the present month.

Wheat fields should be examined to ascertain if the water courses are free from obstructions. Thaws not unfrequently occur during the winter, and furrow drains become choked with snow, ice, and earth, especially if they have not been well cleared of loose earth the previous autumn. Geese often stray upon wheat fields during thaws and do much injury. Whenever open weather occurs during winter, the first inquiry ought therefore to be, "Where are the geese?"

Cattle should not be kept too closely together in yards, and particular care should be taken of the weaker individuals. "On this account," says Arthur Young, "there ought ever to be plenty of trough and rack room, that too many may not feed together; in which very common case, the weaker are not only trampled down by the stronger, but they are worried and become cowed and spiritless, than which there cannot be a more unfavorable state for thrift; besides, these are ever compelled to shift among the worst part of food. * * * This is, much oftener than is suspected, the chief reason of the difference so visible in a lot of beasts after a winter's keep." As the stronger animals generally manifest a remarkably domineering spirit, they should either be kept apart from the weaker, or else their horns should be tipped with balls to blunt them; a little care in this respect would prevent the sight of several gored and wounded animals, so often witnessed in cattle yards.

Whenever cattle become drooping and fall away in flesh, they should be immediately examined to see if this is not owing to lice which is frequently the case. When they are thus infested, it has been recommended, in order to repel them, to rub the upper part of neck and back with warmed hog's lard. An anecdote, just related, may possibly serve to throw a little light on the subject. A neighbor recently had several cattle in a declining state, and were supposed to be lousy. He inquired of a workman in his employ relative to the cause, and was informed that the lice crawled to the animal's nose every day to drink the drops of sweat, and that this was the cause of the drooping appearance of his cattle. He replied that he would soon put a stop to that.

He accordingly tied a small string which had been previously drawn through mercurial ointment, or unguentum cœruleum, round the animal's neck in order to cut off the passage. The consequence was that in a few days a remarkable change was witnessed for the better; not probably however in consequence of the insects being deprived of their sweaty beverage, but from their abhorrence of the mercurial application.

Sheep require, equally with cattle, attention relative to keeping weaker and stronger individuals in the same flock. When any therefore appear spiritless and weak, they should be immediately separated from the flock, and placed in an enclosure by themselves, so that they may not be driven or crowded away by others, and where they may receive additional care and attention and more nutritive food. In this way, they may be often easily wintered, when they would otherwise soon perish. Lambs of the last season should always be kept separate from the rest of the flock; this is absolutely necessary.—*Genesee Farmer.*

[From the Poughkeepsie Telegraph.]

A GREAT LOT OF PORK.—Dutchess county perhaps stands as high almost as any we have any account of in many kinds of productions, and one great thing is the article of Pork. I often hear it told what such an one has done. As I have been a dealer in the article of Pork for many years, I will now give the public a statement of what old Dutchess and a small part of Columbia has done, commencing in the fall of 1824, and so on up to the fall of 1834.

Year.	*Hogs.*	*Weight.*	*Dolls.*	*Cts.*
1824	4095	1,016,997	50,441	85
1825	1096	266,273	11,425	65
1826	3253	749,568	30,115	54
1827	2652	700,116	36,941	47
1828	847	219,054	10,308	74
1829	848	195,706	8,606	91
1830	1171	295,748	16,415	99
1831	1860	423,363	20,982	29
1832	3501	804,516	45,633	52
1833	1457	364,685	20,154	38
1834	1953	514,198	28,327	12
Total,	22,733	5,550,224	$279,353	46

If the editors of the different newspapers would give the above a place in their papers it would confer a favor on the publisher. I don't wish to be understood that the above quantity of pork is all that was fattened in that time in Dutchess county. As I am pretty well acquainted with the business, I think it not much more than one quarter* of the quantity which was fattened in the time above stated. BORNT G. BURTIS.

Pleasant Valley, Dutchess Co. 2d Mo. 10, 1835.

* Probably not the 1-16th—Eds. Tel.

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BALTIMORE PRODUCE MARKET.

☞ *These Prices are carefully corrected every* MONDAY.

	PER.	FROM	TO
BEANS, white field,	bushel.	2 00	2 50
CATTLE, on the hoof,	100lbs.	5 50	6 50
Slaughtered,	"	3 00	4 00
CORN, yellow,	bushel.	63	64
White,	"	60	— —
COTTON, Virginia,	pound.	16	17½
North Carolina,	"	—	—
Upland,	"	—	18½
FEATHERS,	pound.	35	37
FLAXSEED,	bushel.	1 62	1 75
FLOUR—Best white wheat family,	barrel.	6 00	6 50
Do. do. baker's	"	5 50	6 00
Do. do. Superfine,	"	4 75	5 00
Super Howard street,	"	—	4 75
" " wagon price,	"	—	4 62
City Mills, extra,	"	—	5 12½
Do.	"	—	4 87
Susquehanna,	"	—	—
Rye,	"	—	—
GRASS SEEDS, red Clover,	bushel.	5 00	5 50
Timothy (herds of the north)	"	2 50	3 50
Orchard,	"	3 00	—
Tall meadow Oat,	"	2 00	2 50
Herds, or red top,	"	1 25	—
HAY, in bulk,	ton.	— —	—
HEMP, country, dew rotted,	pound.	6	7
" water rotted,	"	7	8
HOGS, on the hoof,	100lb.	5 75	6 50
Slaughtered,	"	—	—
HOPS—first sort,	pound.	15	—
second,	"	13	—
refuse,	"	11	—
LIME,	bushel.	30	33
MUSTARD SEED, Domestic,	"	5 00	6 00
OATS,	"	30	33
PEAS, red eye,	bushel.	—	— —
Black eye,	"	87	1 00
Lady,	"	100	—
PLASTER PARIS, in the stone,	ton.	3 00	—
Ground,	barrel.	1 37	—
PALMA CHRISTA BEAN,	bushel.	1 50	1 56
RAGS,	pound.	3	4
RYE,	bushel.	—	—
TOBACCO, crop, common,	100 lbs	4 25	5 00
" brown and red,	"	5 00	7 00
" fine red,	"	7 00	9 00
" wrappery, suitable for segars,	"	6 00	12 00
" yellow and red,	"	8 00	12 00
" yellow,	"	9 00	12 00
" fine yellow,	"	12 00	16 00
Seconds, as in quality,	"	4 00	5 00
" ground leaf,	"	5 00	9 00
Virginia,	"	5 00	10 00
Rappahannock,	"	—	— —
Kentucky,	"	6 00	9 00
WHEAT, white,	bushel.	1 05	1 10
Red,	"	1 00	1 02
WHISKEY, 1st pf. in bbls	gallon.	28½	29½
" in hhds	"	28	—
" wagon price,	"	24½	25
WAGON FREIGHTS, to Pittsburgh,	100 lbs	— —	1 75
To Wheeling,	"	—	2 00
		washed.	*unwash*
WOOL, Prime & Saxon Fleeces,	pound.	50 *to* 60	24 *to* 26
Full Merino,	"	44 50	22 24
Three fourths Merino,	"	37 44	22 24
One half do	"	33 37	22 24
Common & one fourth Meri.	"	30 33	20 22
Pulled,	"	31 38	22 24

BENE SEED.

JUST RECEIVED at this Establishment, and for sale, by the pound or in 12½ cent papers, a small quantity of the seed of this most valuable plant. It is very efficacious in the Bowel Complaints of children, and not difficult to be administered. The seed should be planted in April, in hills like beans, and the leaves will be in perfection in June. Two or three leaves being put into a tumbler of spring water, for 10 or 15 minutes, convert it into a mucilage, which being tasteless, children readily drink.

BALTIMORE PROVISION MARKET.

	PER.	FROM.	TO.
APPLES,	barrel.	$3 00	$5 00
BACON, hams, new,	pound.	11	— —
Shoulders,	"	8	9
Middlings,	"	—	—
BUTTER, printed, in lbs. & half lbs.	"	25	37
Roll,	"	15	25
CIDER,	barrel.	—	—
CALVES, three to six weeks old	each.	3 00	6 00
COWS, new milch,	"	17 00	30 00
Dry,	"	6 00	10 00
CORN MEAL, for family use,	100lbs.	1 50	—
CHOP RYE,	"	1 50	—
EGGS,	dozen.	19	20
FISH, Shad, salted,	barrel.	5 75	6 00
Herrings, salted, No. 1,	"	4 75	— —
Mackerel, No. 1, 2 & 3,	"	5 12	7 00
Cod, salted,	cwt.	2 50	3 00
LAMBS, alive,	each.	1 25	2 00
Slaughtered,	quart'r	31	50
LARD,	pound.	8	9
ONIONS,	bushel.	62	75
POULTRY, Fowls,	dozen.	1 50	2 25
Ducks,	"	—	2 50
POTATOES, Irish,	bushel.	40	62
Sweet,	"	—	—
TURNIPS,	"	37	50
VEAL, fore quarters,	pound.	3½	4
Hind do.	"	64	—

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feb 17 Baltimore.

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THE FARMER & GARDENER;

AND LIVE-STOCK BREEDER & MANAGER.

CONDUCTED BY I. IRVINE HITCHCOCK, AND ISSUED EVERY TUESDAY FROM THE AMERICAN FARMER ESTABLISHMENT, AT $5 PER ANNUM, IN ADVANCE

No. 44. **BALTIMORE, MARCH 3, 1835.** **Vol. I**

☞This publication is the *successor* of the late

AMERICAN FARMER,

(which is discontinued,) and is published at the same office, at five dollars per year, payable in advance.

☞When this is done, 50 cents worth of any kind of seeds on hand will be delivered or sent to the order of the subscriber with his receipt.

American Farmer Establishment.

BALTIMORE: TUESDAY, MARCH 3, 1835.

IMPROVEMENT OF THE SOIL.

☞Every patriotic attempt to improve the condition of a country, must, to prove extensively useful, be connected with plans for the amelioration of the soil. No country can be long prosperous, can long be rich or powerful, whose *lands* are neglected, whose *soil* is not nourished and cherished with the most anxious, the most filial affection—the *dust of whose fields* is not watched and guarded with the most jealous attention.—What avails it to a state, that her government is free and pure, if her fields be unable to afford sustenance to her people? What avails it, that just and wholesome laws are enacted, if those laws bear rule alone over sterile deserts, over barren and unproductive fields? The sustenance of a people, their riches and their strength, must all be drawn from the soil: and when the sources of these fail—the power, pride, pomp, and glory of empires must wither away, and become as the dreams of the morning, that are remembered no more.

No sincere and enlightened patriot, therefore, can cast his eyes over the surface of his beloved country, without taking a lively interest in all that concerns the agricultural affairs of the people. If agriculture be neglected, a state must decline in wealth, must decline in power, and sink in political consequence in the scale of nations. But it is not alone the *present* prosperity of the agricultural interest that will engross the patriot's attention. His views will be *prospective*—he will look to means which may be taken, not only to preserve the soil in its original fertility, but to increase that fertility, and make the productive powers of the earth, keep pace with the increasing wants and necessities of an increasing people.—With what indignation must he view that selfish and short sighted *land-killing system*, which for the sake of present gain, *would destroy the soil*, and sap the foundations of the future greatness and prosperity of his country?

We wish it were possible that reflections such as these, could be made to sink deep in the hearts of our southern readers. We wish that they would seriously ask themselves, what must be the destiny of the southern states if the same *land-killing* system which has hitherto been pursued, be persisted in for fifty years longer? The question is pregnant with interest and demands a serious consideration.

SILK.—The advantageous production of this article as a domestic manufacture in the United States, was till recently considered chimerical by most people; and consequently the arguments adduced in its favor were generally disregarded.—Public sentiment, however, seems rapidly changing its course on this point, and a general solicitude on this subject, has succeeded former apathy. Our correspondence, both public and private, bears ample testimony to this fact, while it affords us the pleasing assurance that the time is not distant when the culture of silk will be generally adopted.—*Southern Planter.*

MARYLAND HORTICULTURAL SOCIETY,

Feb. 28, 1835.

At a regular meeting of the council, the following articles were exhibited, viz.

By Mr. Edward Kurtz—Camellias, Chandleri, Variegata, single white, double white, Flavescens, Florida, Grandiflora, Imbricata, Pœonia, Knightii, Deantheflora, and Conchiflora.

By Mr. Zebulon Waters—Single white, double red, Carnea, Pœonia, Variegata, Coccinca, Helerophylla, and Atrosubens Camillias.

By Mr. Samuel Feast—Camillias Woodsii, Anemone white, do. red, single white, double white, Carnea, double red, and single red, Erica multiflora, Lachenalia tri-color, Primula Sinensis, do. Auricula six varieties, Acacia Linaris, &c.

At the meeting January 31, 1835, a package of Salonica tobacco seed was received by the hands of Lt. Long, of the U. S. Navy, from Wm. Benning Llewellyn, Esq., American Consul at Salonica, and the same handed to Gideon B. Smith, corresponding secretary, for distribution. The thanks of the society were voted to Mr. Llewellyn, and he was ordered to be nominated to the society as a corresponding member.

Office of the Maryland State Colonization Society,

Baltimore, Feb. 21st, 1835.

The Board of Managers of the Maryland State Colonization Society having determined to complete two expeditions to their Colony at Cape Palmas, during the present year—Notice is hereby given to the friends of Colonization that the first expedition will sail from this city in all the month of May ensuing, with not more than one hundred and fifty emigrants; the second will sail in all the month of October following, with a similar number.

All free persons of colour, residents of Maryland, who may wish to emigrate to the Colony, are requested to make early application to the Board of Managers, or to the Local Agent at this office, corner of Fayette and St. Paul's street.

As the Colony has been founded upon the principles of temperance and industry, it is hereby made known to all who may wish to become members and fellow-citizens of the Infant Republic of "Maryland in Liberia," that testimonials of character will be required by each and every applicant.

It is hoped and believed that there are thousands of the free coloured population of Maryland, who will regard this condition as one of the most conclusive evidences that could be offered of the society's benevolent intentions towards them.

The friends of colonization throughout the State, into whose hands this notice may fall, are respectfully requested to read it to such free persons of colour, as may be desirous to emigrate, residing in their neighbourhood.

The third Annual Report of the Society is now in a state of preparation for general circulation throughout the State. It contains most cheering intelligence from the Government of the Colony, especially in regard to the climate, soil and productions of the Territory.

WM. McKENNY, Col. Agent for Md.

THE FARMER.

[From the Genesee Farmer.]

On Draught.

(Continued from page 339.)

In farther pursuing our inquiries relative to the *application* of animal power, the *modus operandi*, or the manner of attaching the power to the weight, forms an important consideration. We have seen that the structure of the animal, his muscular power, speed and bottom, and the quality and degree of resistance, all have more or less influence upon the effect produced; and we shall now find that the mode of harnessing a horse and attaching him to his load, also has an influence upon his productive labor.

If we could always use our draught horses upon rail-ways, where the resistance is so slight, and its quality exactly what it should be, it would be a matter of little importance, in ordinary cases, how we connected them with their loads; but while we have to encounter every variety of resistance, up hill and down, over rough roads and smooth, it is important to avail ourselves of every circumstance, however trifling, which may increase our products without injury to our animals, or expense to ourselves.

In ancient times the harnessing a horse was a very simple matter. A strap around the neck, or a band around the girth, with a connecting rope or leather, was all that was thought necessary; and even in more modern times, every nation has a mode peculiar to itself, though all depend upon one and the same principle for effect.

But whatever may be our preferences, or however many our expedients to decorate our animals, or modify their labor, the effect they produce, will always depend in some measure upon the arrangement of the traces.

The angle of inclination, or in other words, the direction of the traces from the shoulder to the load, has been a topic of much discussion.—There are but three modes of directing the traces; horizontally from the shoulder to the load; an upward inclination from the same point; and a downward inclination. These have all had their advocates; but so far as I can judge, the *force of traction* is not altered in either case. If the trace inclines upward from the shoulder, then a portion of the animal's weight is borne by the trace, and of course communicated to the carriage; and if the trace is inclined downward, the effect is, that the horse lifts, as it were, a part of the load; while in both cases, the force of traction is the same as that exerted upon a horizontal trace. In the first case, the *effect* is increased by the *weight* of the animal; in the latter, by his muscular strength, or capability of sustaining weight. The advantage or disadvantage, then, of either of these modes of application must depend upon something else than mere *force of traction.*

But *there is*, nevertheless, advantages to be gained in the use of these several modes. It is evident, from the very construction of different horses, that their *capabilities* are essentially different, though their force of traction may be the same. One may be a small, muscular, nervous animal, exerting an average force of traction of 125lbs.; another, with large muscular legs, is perhaps calculated to sustain a great weight; while a third may possess an unwieldly bulk of flesh and bone, which of itself is a load, and yet neither of the latter horses be able to exert a greater force of traction than the former. In the first case, comparing one animal with the other, nothing would be gained by deviating the traces from a horizontal direction. In the second, an evident advantage would be gained by inclining the traces downward, for then the effect would be increased by putting a part of the load upon the horse, thereby leaving less weight to be operated upon by his force of traction. And in the last case, a corresponding advantage would be obtained by inclining the traces upward, so as to take the benefit of the animal's weight in addition to his strength.—Hence it is evident, that so far as the animal is concerned, the inclination of the traces ought to depend upon his *particular capability*, and not upon any general rule.

But, independent of the animal, there is another consideration which should influence the inclination of the traces. In the above cases, I have supposed the weight to be removed upon a smooth surface; but it is evident, where the road is rough and the resistance constantly varying, a great advantage may be gained by enabling the horse to lift a part of his load over the obstacles; which will be effected by inclining the traces downward, let the animal's capabilities be what they may.—On most of our roads, however, there is a constant variation from smooth to rough, from ascent to descent; and it will, therefore, be desirable for every man to fix upon that inclination which on the whole will best suit his circumstances; for it would be impossible to change the direction of the trace at every change of surface. Hence we find how much more effect wheel horses are enabled to produce upon our common roads, than leaders; for the latter can never apply their strength except in a horizontal direction; while the former exert the same force of traction, and at the same time increase the effect, by their nearness to the load, and relieving the weight. Hence, too, it is evident, that upon ordinary roads, the mode of harnessing horses one before another, as in our stage teams, is not the most efficacious mode of applying their powers. The plan adopted by the New-Jersey and Pennsylvania teamsters, of harnessing four horses abreast, and directly to the carriage, is doubtless the most efficient, if not the most convenient.

The common use of the gig, or dray cart, is another exemplification of this principle. The weight thrown upon the shaft, is the same thing as weight applied to the traces by a downward inclination; and it is well known to practical men, that most horses will carry the same load easier in this way, if correctly divided, than where the whole depends upon the animal's force of traction.

The fitting of the trace to the collar is another point worthy of remark. The structure of the horse, however, determines this matter almost wholly, and generally, in this country, it is judiciously applied. The connecting point between the collar and the trace, should be about two-thirds of the distance from the top of the collar to its lowest extremity, for there the collar bone is smallest, and the most muscle is presented to sustain the pressure. The old fashioned New-England mode of applying a connected trace around the breast, and sustained by a strap over the neck, was exceedingly irksome to the horse, as the whole strain passed directly over the joint of the collar bone, and thereby nearly paralized the operation of that joint.

In general, then, where the road is smooth and the gait slow, the traces should be as nearly horizontal as possible; unless where an extraordinary exertion is required, and then the traces should be a little inclined downward, so as to put a small part of the weight upon the horse. When the road is rough, and the gait also slow, the traces should be applied still lower down, so as to give the horse the greatest power over obstacles. But where great velocity is required, without much attending weight, the nearer the traces can be brought to horizontal the better, for then the horse is enabled to exert his force of traction without any counteracting influence.

In my next number, I shall proceed to consider, in part, the second branch of this subject, to wit, the *vehicles to be moved*, in connection with the *channels of conveyance*, but with especial reference to Canals and Canal boats.

QUERCUS.

[From the same.]

Gama Grass.

I believe no account has been published of any experiment in the culture of Gama Grass, made north of of the James river. A great degree of interest has been excited in regard to its merits; and as the plant has been found growing indigenously in Pennsylvania, and even as far north as Connecticut, the inference has been naturally drawn that it may be brought into successful cultivation elsewhere than in the Southern States.—Though my experience is by no mean extensive, yet as far as it goes I am encouraged to persevere; and I shall therefore make no apology for introducing the subject to public notice.

For a year or two past I have had the Gama Grass growing in my garden in various situations, from the richest soil to that of only tolerable fertility. I have discovered but little difference in the luxuriance of its growth under these different circumstances—a result which may be attributed to the number and strength of the roots, which penetrate deeply into the substratum, and draw nourishment from sources not readily accessible to less vigorous plants. From this disposition in the roots, it is reasonable to conclude, that the subsoil should be rather of a porous nature, the more readily to admit their entrance. Mine on the contrary is of a firm adhesive texture; and I am therefore induced to doubt whether the results of my experience were as favorable as they might have been in a different soil.

I find the grass to be rather tardy in putting forth its shoots in the spring. It is nearly the first of the 5th month (May) before it exhibits any signs of vegetation; but from that time it progresses with great rapidity. On the 4th of June I cut some which was about three feet high, although it stood close to some very thrifty trees, which abstracted almost all sustenance from every thing else within their influence. After cutting, I observed its growth attentively for some time,

and found that the blades grew an inch and a half per day; so that in the course of another month the grass had nearly attained its full size again.—Having spread some seed stalks, I refrained from cutting it a second time until they had matured their seeds.

In a communication published a few months ago in the Farmers' Register, by Agricola, (the signature adopted by the gentleman who first brought the Gama Grass into notice) he mentions that with him the growth of the blades after cutting was precisely the same which I have stated it to be here. But his observations being made in a much more southern climate, where the spring is considerably earlier, and the autumn continues to a much later period, the *number* of his cuttings was greater than we have any reason to expect can be profitably realized in a higher latitude. I am of opinion that four times is quite as often as the grass can be cut to advantage above tide water in Virginia; and in New-York it might not exceed three. With this drawback, however, if there be any reliance upon the calculations which have been made relative to the product, the cultivation of Gama Grass must be regarded as an object of importance by farmers generally. I am well aware that calculations founded on a limited knowledge are extremely fallacious; still, after the many which have been made, and in one or two instances fully justified by the result, they are doubtless deserving of some attention. Not to be singular, I am willing to follow the example set by others, and venture upon one in this communication; in which, whatever of error may exist, it will, I am persuaded, be on the safe side.

I had several plants in a favorable situation that I reserved for seed, which where only subjected to a single cutting, made after the seeds were gathered. They stood close to each other, and were surrounded by vegetables usually cultivated in a garden. They were moreover *young* plants, being only in the second year of their growth. On the 18th September, they produced each seven pounds of green grass, which when perfectly cured and weighed a few days ago, yielded three pounds of hay. Now at two feet of distance each way, there will be ten thousand plants to an acre of ground. Admitting therefore that only one crop could be obtained during a season, here is a product of thirty thousand pounds of hay to a single acre. It may be objected that if the acre of land was fully occupied, the growth would be less luxuriant. But I am satisfied that each healthy plant would have attained the same size; inasmuch as those to which I have previously referred as growing in the vicinity of the trees, gave after two cuttings the same aggregate product.* In regard to the quality of the hay, it possesses a delightful fragrance, very much like that of corn blades; and was greedily eaten by horses. I think however the hay cannot be highly nutricious, *when the grass is frequently cut;* for in that case the blades are so succulent as to lose too much of their weight in drying.

The propagation of the Gama Grass is effected either by seeds or offsets. There is some difficulty in getting the seed to germinate in consequence of the rigid husk which envelopes the kernel. They should be planted in autumn and thus subjected to the action of a winter's frost; or some artificial method be used to soften the husk or disengage the grain from its covering. It is stated by the editor of the Baltimore Farmer, that if the seed be steeped for a day or two, in a mixture of plaster of Paris and fourth proof spirit in such proportions as to make a liquid of the consistence of white wash, they will readily sprout. The vessel containing the mixture should be placed near a fire, to keep moderately warm. When one has only a few seeds, a more convenient way would be to remove the husk entirely, which may be readily done with a penknife, by carefully separating the two portions where they are attached to each other at the base of the seed. Previous to the operation it might be proper to soak the seed a short time in warm water, to make the husk yield more readily to the knife. When the removal is effected, there is no farther impediment to germination, which will take place as soon as in wheat or corn.

After being so fortunate as to rear a few plants, the best mode of increasing them is by offsets. A well grown plant of a year old may be divided into twenty or thirty, and sometimes more; pains being taken to have a root to every offset. They bear transplanting as well as lettuce or cabbage. It will be necessary to keep the young plants clean of weeds and grass during the first season, and the commencement of the next. If the grass should be flourishing, it will need but little more culture, and will increase in strength and luxuriance for several years. Two years ago I began with *four plants*, after leaving a few to bear seed and to give me some promise as to the size they would attain. Being seedlings and of a rather weakly growth, I only obtained thirty-six from them at that time; but last spring I divided them again into six or eight hundred.

Should any farmer be desirous of testing the merits of this Grass in the climate of New York, he may apply to the Editor of the Genesee Farmer for a few seeds, to whom I have sent a small number for distribution. T. S. P.

Beaverdam, Va., 1 mo. 10, 1835.

[From the Southern Planter.]

Of Tillage, and the principles on which it is founded.

Tillage has three objects:—1st, the raising of plants, whose seeds, stems or roots may be necessary or useful to man and the animals he employs,—2d, the improvement of the soil, by laying in open to those atmospheric influences which increase its fertility;—and 3d, its destruction of weeds, or plants which rise spontaneously, and are either altogether unfit, or fit only in a small degree, for the nutrition of men and cattle, and which, if left to themselves, would stifle or starve the intended crop.

In fulfilling either or all of these objects, it is evident that the surface of the earth must be broken and divided into small parts, so that in the first instance it may furnish a bed and covering for the seeds, enable them to push their roots into the soil, and draw from it a portion of their subsistence.

To accomplish this leading intention (the division of the soil) various *means* have been employed. Fossil, animal and vegetable manures, as well by their mechanical action, as by their chemical properties, promote it; as do sand, pounded limestone and water (as in the culture of rice;) but it is to the *spade* and *plough* we must look for that degree of efficiency without which the earth would have remained a desert, or would become one. Of these, where the scale of labor is small (as in *garden* culture) the former is to be preferred; but in farming, the greater expedition of the latter gives it a decided advantage. Our remarks, therefore, will be confined to the operations of this instrument, and particularly to such of these as have given occasion to differences in opinion among practical farmers.

1st. At what season of the year (spring, summer, or fall) is ploughing best performed, in relation to a division and improvement of the soil and the destruction of the weeds?

The more scientific opinion is in favour of *fall* ploughing; because to the action of the air and moisture, it adds that of *frost*, whose sceptic or dividing quality is second only to that of the plough itself. In clay soils, this preparation should never be omitted; because on those the action of frost is greatest, and because one ploughing of *this* kind may save two in the *spring*, when time is every thing.—In this operation, however, we must not forget to *ridge* as well as *plough;* and care must be taken that our furrows have sufficient declination to carry off surplus water.—With these precautions, your clay ground will be ready early in the spring for another ploughing; and decomposition of the sod and weeds (turned down in the fall) will be nearly, if not altogether, complete.*

In dry and warm soils, these advantages are less, but still the time gained for spring work is a sufficient inducement to a practice that economises, not merely our labor, but the productive powers of the earth also, by soonest enabling us to shade the soil with a growing crop.†

2d. What number of ploughings, preparatory to a crop, is necessary or proper?

The Romans were in the practice of multiplied ploughings. This appears, as well from the precepts of Cato, as from the opinion of Colnmella, that "tillage, which does not leave the earth in a state of dust and renders the use of harrows unnecessary, has not been well performed." Tull and his disciples, carry the doctrine still further, and believe that frequent ploughings enable us to dispense with even the use of manures. This, however, is extravagant; it is certain that the

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* The same product when *dried*, but it was considerably more in the *green* state; a greater loss having been sustained by making the first cutting so early.

* Without water there is no *decomposition*, and much water checks and prevents it.

† Those who have any doubts about the importance of *shade*, have but to look at the effect of a brush heap, or other collection of small bodies, admitting air, heat and moisture, during the spring or summer months. Under such collections he will find a much more vigorous vegetation, than in the uncovered parts of the field; the cause of this effect is, that the brush prevents *evaporation*.

plough can do much, but it is equally certain that there is much it cannot do.

Agricultural, like other business, having profit for its object, is a subject of calculation; its labor must be regulated by its end, and the moment the expense of this transcends the profit, it may be *improvement*, but it ceases to be *farming*. When, therefore, we hear of *six* ploughings, preparatory to a wheat crop, we conclude, either that the plough will soon stop, or that it belongs to one of the Dilettanti, who thinks it below him to count the cost. In our practice, we find that spring crops (of the cereagramina) succeed best on one fall ploughing, well ridged and furrowed, and one cross ploughing in the spring; and the spring and summer crops, of the leguminous and cruciform families, form the best possible preparation for winter crops, and render unnecessary more than one additional ploughing. After all, any proper answer to this question must necessarily be qualified by considerations of soil, weather, season, crop and culture; influences which cannot but exist in all cases, and over which we have no control. Wheat, for instance, requires more *preparatory* ploughing than rye, and rye more than oats. Clay ground demands more tillage than calcareous earth, and calcareous earth more than sand; wet or dry weather makes frequent ploughings (according to circumstances) either useful, injurious or impracticable; and the shade of a horse hoed crop is, perhaps, in itself, of more importance to that which succeeds, than would be the fallowing of a whole summer.

3d. What depth of ploughing is most to be recommended.

This question, though less complicated than the last, requires, like it, an answer qualified by circumstances. *Tap rooted* plants require deeper tillage than others: *fall ploughings* may be deeper than those of *spring*, and *spring* than those of *summer*. If the vegetable soil be deep, deep ploughings will not injure it, but if it be shallow, such ploughings will bring up part of the *sub-soil*, which is always *infertile, until it receive new principles from the atmosphere*. "They who pretend," say Arthur Young, "that the underlayer of earth is as proper for vegetation as the upper, maintain a paradox, refuted both by reason and experience."

Where, however, it becomes part of your object to increase the depth of the surface soil, deep ploughing is indispensible; and in this, as in many other cases, we must submit to present inconvenience for the advantage of future benefit.—But even here, it is laid down as a rule, that *in proportion as you deepen your ploughings, you increase the necessity for manures.*

"From six to eight inches may be taken as the ordinary depth of sufficient ploughing." And,

4th. Of the different modes of ploughing [level or ridge ploughing] which is to be preferred?

This question admits no *absolute* answer. We have already suggested the use of the latter mode, in stiff, heavy, wet clays, and, in our opinion, all ground in which clay predominates, whatever be the culture, should be made to take this *form;* because it powerfully tends to drain the soil and carry off, from the roots of the growing plants, that superfluous water which, left to itself, would seriously affect both the quality and the quantity of their products. In sandy, porous, dry soils, on the other hand, *level* ploughing is to be preferred, because ridging such soils would but increase that want of cohesion, which is their natural defect.

A *loamy soil*, [which is a medium between these two extremes,] ought, in a dry climate, to be cultivated in the *flat* way, that it may the better retain moisture; and in a wet climate in *ridges*, that it may the sooner become dry.

THE BREEDER & MANAGER.

[From the Horticultural Register.]

A PARASITE OF THE HONEY BEE.

THOMAS G. FESSENDEN, Esq.:—The late Gen. Martin Field, of Fayetteville, Vermont, who was distinguished for his enlarged and liberal mind, and his love of science, sent to Professor Silliman the enclosed important communication, which was published in the American Journal of Science and Arts, Vol. xxv. No. 1, for October, 1833, pages 113—14.

The discovery announced in this communication is so interesting to the bee-keeper and the naturalist that it deserves to be generally known; and, as there are some points in it upon which additional information is required, you will do me a favor by giving to it, with the remarks here added, a place in both your Horticultural and Agricultural Journals.

For a few years past, many of those people in this vicinity, who have apiaries, have found that in the months of April, May and June, an unusual mortality has prevailed among their bees. This circumstance has led to a thorough investigation of the cause, by those who have felt a particular interest in the products of this valuable insect; and the result has proved, that this mortality has been produced entirely by a parasite.

More than two years since, one of my neighbors suggested to me his conjectures that there was a parasitic fly that was injurious to the honey bee; since which time we have fully ascertained the fact. I have a box, now before me, containing a great number of dead bees, in which may be found the parasites, in both the pupa and the perfect state. Usually the bees become sickly and unable to fly, when the parasites are in the larva state; but they sometimes live till the perfect insect emerges from the pupa. The larva is fixed at the inosculations of the dorsal segments of the abdomen of the bee, and is hardly discoverable by the eye unless the abdomen be dissected. The larva is white, nearly two lines in length, and very much resembles a small worm or maggot. The pupa is nearly the size of the larva, and of a reddish brown color. The perfect insect is a nondescript, and bears very little resemblance to the *Stylops* or *Xenos*, or any other insect that has been found to be a parasite of the bee or wasp.—It is of the order Diptera of Linnæus, is little larger than the Hessian fly, but, in color and form, is very unlike that insect.

Mr. Kirby, many years since, discovered that the insect, *Stylops*, was a parasite in the black-bronze bee, *Andrena nigro-ænea*, in England, and Professor Peck afterwards found that the *Xenos* was a parasite in wasps, in America; but I am not aware that a parasite of the honey bee has ever been discovered till of late, and in this vicinity.

In conclusion, I would most sincerely request those who have apiaries, to examine their hives during the spring and summer months, and if this parasite be discovered, to investigate the history of the insect, and, if posssible, to find a remedy for the injury it may produce.

MARTIN FIELD.

Fayetteville, Vt. May 15, 1833.

REMARKS.

The discovery of an intestine enemy in the bee, hitherto unknown and unsuspected, and its existence to such an extent as to cause an unusual mortality among these useful and industrious insects during their busiest season, were facts which on their first publication, strongly excited my curiosity; while the very brief description, which was given of the parasitic insect in its perfect or winged state, was not sufficient to enable me to make out the genus, or the rank which it held in a systematic arrangement. In answer to my inquiries on this subject and request for specimens, Mr. R. M. Field, the son of the above named gentleman, informed me that his father had sent the parasitic insects, twenty or thirty in number, to a lady, in order to have drawings made from them, and all of them were lost through carelessness.—This accident may account for the very imperfect description of the fly which was drawn up by Gen. Field. During the last summer Mr. Field obligingly sent to me some insects, which were given to him, by a person who, from some circumstances, was led to suppose that they were instrumental in producing the mortality among the bees. They proved, however, to be a kind of wild bee, (*andræna frugalis,*) at least half as large as the honey bee itself, and were furnished with *four* wings, in all which respects they differ essentially from the parasitic flies as described by General Field.

In order to avoid any mistake in searching into the history of the little parasitic enemies of the honey bee, it will be well to keep in mind the following facts derived from the information given by Gen. Field.

These insects infest the bees during the months of April, May and June, and they are found in three different forms.

At first they are *maggots*, of a white color, nearly one fifth of an inch long, and live between the joints of the back of the bees.

Second. After a time they cease eating, their bodies shorten, and their skins become of a brownish color. They are now entirely quiet, and are in, what may be called, a state of transition (*pupa*) intermediate between maggots and flies.

Third. At length the insects burst the brownish skins which cover them, and come forth in the form of little *two-winged flies*, rather larger than the Hessian fly, probably about the size of a musquito. They are then, like all other winged insects, in a state of maturity, and, consequently, in a condition to lay their eggs.

To complete the history of these little parasites, information is wanted upon a number of points, which, it is hoped, will receive the atten-

tion of persons who have the leisure and opportunity to make the necessary investigations.

If, during the proper season, a considsrable number of sick, dying, and dead bees are procured and confined under tumblers, (those of them which are still alive being daily fed with a drop or two of sugar, syrup or honey,) the little parasitic insects, with which they are infested, may be observed during their changes of form, and will probably, in due time, be found flying about beneath the tumblers.

Bee-keepers, and especially those who reside in that part of the country where these insects have been discovered, are most earnestly requested to endeavor to ascertain, 1st. When, how, and where do the flies lay their eggs; 2d. How long do their young remain in the maggot state; 3d. How long are they in what is called the *pupa* state, or state of transition. When, in addition to these facts, the means are furnished for drawing up a full, correct, scientific description of the insects in their last or winged state, their history will be nearly completed, and the way to successful experiment against their insidious attacks will be fairly opened.

The writer of these remarks at one time thought of offering a reward to any person who would apprehend a gang of these marauders, lodge them in the office of the New England Farmer in Boston, and furnish such evidence of their identity as would enable him to try them by the laws of science, and pronounce judgment upon them in their true characters. But, as he is not more interested in the subject than many other persons, he feels that he has discharged his duty in respectfully and urgently recommending the measure, and offering, whenever they are wanted for the purposes above named, the services of

T. W. Harris.

Cambridge, Mass. Jan. 9, 1835.

MANAGEMENT OF BEES.

The Kennebec (Maine) Agricultural Society, at their meeting last autumn, awarded their premium on Bees to Col. John Gilmore, who furnished the Society with the following statement:

"Having entered my name for premium on honey and an hive of bees, I will inform you how I have managed them for a few years past. I keep them in boxes—my boxes are 13 inches square on the outside, and from six to seven inches high, with thin slats across the top about an inch wide, with just space enough to let the bees pass between them. For a young swarm I fasten two boxes together with a board on the top, put in the swarm, and when I set them on the bench, put under as many more as I think they will fill—a large early swarm will fill four or more. I had some this season that filled three in about a fortnight, and then swarmed, and the young swarms have filled four boxes. After my old hives have swarmed once I usually put under one or more boxes. I prefer that course to letting them swarm again, for second swarms are generally worthless. When the weather becomes cool, if the hive is well filled with honey, the bees will all leave the upper box,—it can then be taken off without disturbing the bees in the hive. I usually take from my old hives and early swarms one box containing from 20 to 24 lbs. and leave enough for the bees to live on through the winter, or I can take a part and return the box if I think the remainder is insufficient for them. If my bees grow lazy after the swarming season is over, and hang out on the hive, which is in consequence of the hive being full, I add more boxes. I had a few small swarms which I have taken up otherwise. I have not destroyed any bees. I have taken up on my own farm this season 289 lbs. of good honey in the comb, and I now own, including those that I have taken up, twenty-six hives."

TICKS ON SHEEP.

It is now the time of the year for these troublesome vermin to increase and torment sheep, particularly if they should not be in so good order as a flock ought to be. It will be well to look to them, and give them leave of absence. The best method which suggests itself at present is the smoke pipe; by which as you undoubtedly know, is meant a tube with a bulge or enlarged space in the middle, into which is put some dry tobacco, on this a small coal of fire is placed, and the whole is screwed down to the nose of a bellows, and the smoke thus driven into the wool of the sheep, to the no small annoyance and death of the tick who is thus trespassing on the pelt and comfort of poor *Nanny*.

By the way, a word or two upon the construction of this pipe—many have them made with a screw upon the pipe of the bellows—this makes it necessary either to have a bellows made on purpose—or a new screw cut on every pair of new bellows—but a wooden or tin pipe put upon the pipe containing the tobacco and the smoke blown out by the mouth will do good execution.

Snuff sprinkled on the back of the sheep, and in among the wool in different parts will also be of good service if you have not a smoke apparatus at hand.—*Maine Farmer.*

Horses and Crows.—The corresponding Secretary of an Agricultural Society, in Maine, in making his report to the legislature of the doings of the Society for 1834, has the following observations concerning the quality of horses in his county.

In the breeding of horses, nothing worthy of particular notice has been done of late. Indeed, although there are some good horses here, it may be said, (the opinion of some to the contrary notwithstanding,) that there is not that sort of attention paid to our breed of horses that the importance of the business demands. It is true, that as at present carried on, the breeding of horses is not so profitable as some other branches of husbandry; and for this reason, there ought to be the more strict and careful attention paid to what are raised. It is to be regretted that no regular system—no definite mode of procedure is pursued in regard to this business—a business which demands so much time and capital. The mode at present adopted, (it cannot be called a system,) is, that every mare that cannot be sold, shall be made to breed, and the *cheapest* horse receives the most custom. No wonder that our law givers are called upon to devise ways and means to destroy the *crows*, when our farmers pursue a course which provides so bountifully for the increase and sustenance of these *omenous birds.*

THE GARDENER.

THE MORUS MULTICAULIS.

The Morus multicaulis, or Chinese Mulberry, many persons believe, cannot be propagated from the seed brought into this country. There are difficulties, it is true, attending it, but they are far from being insurmountable. The Chinese devise every method to destroy their vitality before they allow foreigners to purchase them, and it was not until after repeated trials, that a gentleman in this town was able to obtain a quantity of the genuine seed, through the aid of an American Missionary at Canton. This seed has been generously distributed here, and the experiments of last summer have fully satisfied us, that the leaves are as large and the plant as vigorous and thrifty in its growth, as when propagated by cuttings or layers from the Chinese Mulberry.

We notice in the Horticultural journals, a statement that the French Society of Agriculture have decided that the Chinese Mulberry is not a distinct species, and that the seed will not produce its own kind. Farther, this learned body have decided, that the real Morus multicaulis cannot be propagated *except* by cuttings and layers. Some seed sown in Italy and France have produced other varieties of the Mulberry. This may be the true state of the case in Europe, but it is believed such experience has no application to this country.—Our soil or climate, it is to be hoped, will produce from the seed the real plant, and if it should have varieties, and those varieties equal or excel those produced from the cuttings, then so much in advance of other experiments is gained. We presume those who propagate the Chinese Mulberry as a traffic will feel offended at the introduction of the genuine seed into this country. The cuttings, thousands of them have been sold at fifty cents each, but through the perseverance of one of our horticulturists, seed enough for that sum can now be obtained for more than a thousand of the genuine plants.

We have had opportunity, during the past year, to examine with some attention, the cultivation of the Chinese Mulberry, both from cuttings and layers, and also from the seed. We have been able to perceive no difference in the size and appearance of the leaves of the plant, making adequate allowance for the advantage a layer or cutting has over the seed while undergoing the process of germination. Some seed sown late in the season, produced leaves measuring nine and a half by eight and a half inches, and had they had the advantage of early planting, their size would have been much increased. Even as it was, they exceeded often the size of the full grown leaves of the genuine Morus multicaulis. We may believe that another season in this vicinity will put all cavilling at rest, whether the plant is superior from the seed or equal only to the cuttings. The business here will be prosecuted on an extensive scale.—*Northampton Cou.*

Rhubarb.—This is one of the many plants which a farmer may have in his garden, and which may be made to contribute to the delicacies of his table, and to the health and comfort of his family, with very little expense or labor. The plant is

perennial, and resembles much in its habits the burdock, though the leaves and their stalks may be somewhat larger, in a good soil. A dozen plants will serve to supply a family. The leaf stocks are the parts used. The skin or cuticle is pealed off—they are then cut into quarter or half inch pieces, and used without further preparation, with sugar and spices, like unripe gooseberries, for pies and tarts, which fruit it very much resembles in flavor. It may be used in the spring, and till midsummer. Medical men ascribe to it a salutary influence upon health, particularly to children, when used in this way. The seed ripens about midsummer, at which time it may be sown.—*Cultivator.*

[From the Knickerbocker.]

CONVERSATION ON VEGETABLE PHYSIOLOGY.

Stones have been known to move, the trees to speak.
MACBETH.

Reader,—Think not that the subjoined Essay is a piracy, either in matter or style, from the celebrated Conversation on Chemistry, etc.—It is but the following up of a good custom,—for my memory runneth not to the contrary,—of "Mrs. B." and "Emily;" and I would wish to have vegetables, as well as animals, speaking for themselves. Mrs. B. and Emily speak volumes in favor of this plan of diffusing knowledge, and they are naturally philosophic enough to excuse my treading on their heels, while I am paying them the compliment of following in their footsteps. The judicious *may* grieve, but the barren *will* smile, and that is long odds enough to induce me to start, although the production be but a trifle. Should it have a good run, it will signify that the public are pleased—and it is for the public I write.

"My *Eyes*!" said the Potatoe to the Lemon, "how bilious you look to-day. Your skin is as yellow as saffron. What can be the matter?"

Lemon. Acidity of stomach,—a family complaint of ours.

Potatoe. Why don't you take advice?

Lemon. Advice! You know that my poor brother *dropped* off the other day, and without being allowed to rest on his mother earth, his body was snatched up by a member of the Bar, who, instead of acting legally, dissected him—absolutely *cut him up.* "All for the public good," said the rascal, as he squeezed out poor Lem's last gastric juices. Take advice, quotha! If he was not allowed to enter a plea in Bar, what may I expect from Doctor Commons?

Potatoe. That's true. I only hope poor Lem, though he was in *liquor* at the time, had strength enough to give him a *punch* under the ribs: he was a *rum* customer to the last, no doubt,—but I must say I wish his skin had been Fuller. Do you attend the meeting to-night?

Lemon. I feel rather *soured* at present. I met Running-Vine just now with the invitations, and he hinted that there would be a *squeeze*, in which case I should *decline*, as they might *press* me to furnish drink for the company;—in fact, it is always so when they call any of my family to their *aid*.—But now, to be serious, my sweet, *sweet* Potatoe, if you should go, let me advise you not to get yourself into *hot* water: you'll be *dished* to a certainty if you do. Onion, the *strongest* friend you have on earth, brought tears to my eyes, by the bare recital of what would be the probable consequences of your attending it. In case of a row, you'll both have to strip—*peel* off. Now under such circumstances, he'll certainly excite some sort of sympathy; whereas the removal of your *russet coat* might attract more admiration than pity: "lovely in death," would they say,—"*Pallida mors*," etc. Indeed for my own part, I think you do look better *in white*. Oh! another thing I would say: keep out of Horse Radish's company; he will be sure to get you into a *scrape*—a *greater* one than he imagines, perhaps—and as for Onion, (don't let this *leak* out,) I fear the *rope* will end him. I should not like to get into a *stew* with him,—so, mum! Ah! here come Plum and Pear. How savage they look.

Pear. How are you, my dear Lemon? Do decide this question between Plum and me. On referring to Johnson, we find my numerical value estimated at two only, while the rascally Plum is set down for a hundred thousand. Its too absurd: there must be some mistake.

Plum. None at all. Please to recollect, Sir, that I weigh a *stone* more than you.

Pear. From that I must beg leave to *secede*.

Lemon. Stop this *fruitless* wrangling, or I shall be tempted to *skin* you both, to get at the truth. I'm not in *spirits*. As for you, Mr. Plum, no more of your *tart* remarks; and Mr. Pear, if you wish to be *preserved*, the less *jarring* the better. Here comes our good friend Raspberry. How do you do, my fine fellow, and how have you been?

Raspberry. In the most infernal *jam* you ever saw:—'pon honor, 'twas insupportable. What's the news?

Lemon. There is a report which *Bush* has raised, quite *currant* here, that he served you up in sweet style last evening at tea table, before a party of ladies, and the cream of the joke is that you were considerably *down in the mouth*.

Raspberry. Mere envy. You know he cultivates the affections of Miss Rose Geranium, (a sweet creature, by the bye, and has grown very much lately,) but finding that she preferred me, he became saucy, which induced me to beat him into a *jelly*, and send him in that state to his friend Venison, who lives near Fulton Market.

Lemon. (*Puts his hands on his lips and haw haws.*) Bravo! What a funny limb of Satan you are. But Ras, have you seen old Gardener lately? He'll give you a deuced *trimming* when he meets you. He says you ought to have done sowing your wild oats, and that although it goes against his grain to complain of your treading on his corns, he can't stand it any longer, and must peach.

Raspberry. Peach, will he? And are these to be the *fruits* of my bearing with him so long? He has been *picking* at me for some time, and yet it was but yesterday, the ungrateful old *rake*, that I got him out of a scrape with Mr. Horse Radish, who, after seizing him by the *nose*, threw a musk-mellon at his head, exclaiming with an equestrian laugh, "That ought to make at least one *mango*." And go he did, that's certain, all to squash.

Lemon. A challenge will ensue, doubtless.

Raspberry. By no means. No one knows better than Gardener that Horse Radish *shoots like the devil in the spring*, and one *fall* he has already received from him: It would be unreasonable to———but drop this subject, for here comes Mrs. Tree, who seems to wear a very cypressy look.

Mrs. Tree. Good morning, gentlemen. You have heard, no doubt, that I have lost those young *limbs* of mine. Well, perhaps its for the best: offsprings are a great trouble and expense, and to speak the truth, I should pine more at the loss of my *trunk*. Fine growing weather, this: Adieu!

Pear. Pine *more!* I should say she is one of the pine *knots*. There is very little of the weeping willow about her.

Lemon. No, the stingy old creature! No doubt she'd have been *cut down* by the loss of her *trunk*,—she'd have been *chop*fallen then: instead of pining, she talks sprucer than ever. I don't believe she ever went to the expense of having these poor little things *inoculated;* and a very little *matter* would have given them *succour*. She said the other day she was trying *bark* on them: but I vow, here comes Aspen. Aspen, why so agitated? Is there any thing strange in the wind?

Aspen Tree. I'm in such a *flutter*, that I can scarce tell you of our common danger. But in a word, whether it was on account of our extreme admiration for the wood of the forest, or that the chesnuts and the oaks began to *rail* at him, and give offence, it has entered the *head* of Hickory—which is very high just now—to root out, and remove my trembling deposites from the *bank* on which I was reared by the side of the Schuylkill. Supplication is useless. Old Hickory will n. *bend*, tho' we tell him of our *breaking*,—and I advise all of you, who, like me, have *branches, to cut and run.*

Lemon. My skin stands a double chance to be saved—for if I *cut* I shall surely *run*. But are you serious?

Aspen Tree. Serious! I tell you the sooner you all cut stick, the better. *Hickory runs* wonderfully. I'm off.

Lemon. Gentlemen, are you ready for the question? All in favor of *taking our leaves*, will please bow.

[They bow unanimously, and exeuent as fast as their *limbs* can carry them.]

SEED WHEAT.—Extract from a letter:—"To obtain good seed wheat, my father has for several years used a very coarse screen in his fanning mill, which retains only the largest and best kernels. By this means, all the foul stuff passes off, and his seed is perfectly clean. The additional expense of an extra screen is but a trifle."—*Gen. Far.*

STRAW, if not wanted as fodder, should by no means be wasted, as it has many uses, and particularly as a manure; and one of the best modes of applying it as such, is to spread a thin layer of it over wheatfields, as it thus prevents in a great degree the freezing and heaving of the young plants, which are therefore less liable to be winter killed; and by the time the wheat is cut, it is sufficiently rotted to be plouged under with ease.—*ib.*

MISCELLANEOUS.

Twelve Reasons

Why GEOLOGY should be introduced into common schools as a branch of study—taken from "Scientific Tracts" published in Boston.

1. It is nearly allied to geography. The connexion and distinct provinces of these two sciences, have already been pointed out in the introductory remarks of this number. From that view it is believed, many will be ready to acknowledge that the claims of this science to becoming a subject of common school instruction, are equally strong with those of geography, and in some points superior.

2. It is an interesting science. It opens to our view a new world, and presents us with numerous objects of beauty and of interest, before unnoticed. The most barren ledges, the commonest rocks and walls by the wayside, destitute of any thing to admire or notice, show to groups of young explorers, that these have not merited the long neglect they have suffered; but they contain much that is rich and beautiful, not merely when arranged on the shelves and cases of a cabinet, but when placed on the mantel piece of the parlor or drawing-room, and furnishing instruction and delight to the most elevated minds.

3. It is among the grandest of sciences. It leads us to view, with increased admiration, the towering mountain and awful precipice, and induces and enables us to examine with greater ardor and more exalted delight, those features of the earth, which never fail to excite ideas of sublimity even in the rudest mind. We learn from it, that amid the lofty aspect, the terrific grandeur, and the wild confusion of the Alps and Andes, there is order and regularity, which evince the skill of a wise and all powerful architect. Arrangements amidst apparent disorder, a vast storehouse of riches overhung by forms of terror, objects of the highest beauty grouped beneath the awfully sublime, afford to the passing geologist a moral as well as an intellectual banquet.

4. It gives new interest and increased utility to our journeys and our walks. A person, with the slightest knowledge of geology, never passes from one country or place to another, without finding much to admire, and much to increase his store of knowledge. If he find no thriving village, no field covered with the fruits of the farmer's industry, no fertile tract groaning under its load of stately forest trees, or smiling beneath its dress of beautiful verdure, he still finds, in the barren plain or the broken ledge, much that is beautiful, rich and instructive.

5. It furnishes a healthful and instructive amusement to the young. Wherever it has been introduced into schools, the pupils have taken more or less of their pastime in examining and collecting specimens of minerals within their reach. A geological excursion is uniformly preferred by them to their ordinary sports, too often calculated to dissipate their minds, and unfit them for patient and successful application, when they return to their school-rooms or their books.

6. It teaches children to be observing. A thousand objects, before unnoticed, press upon their view; their imagination and taste are awakened, and called into vigorous and healthful exercise, in discriminating the aspect of objects.—Their minds, once put upon the search to discover what is beautiful and rich in the mineral kingdom, are led to examine other parts of this wide creation; and wherever they go, or whatever they see, they find something to admire, and to convey to their minds entertainment and instruction.

7. It leads to useful discoveries. Wherever the science of geology has been introduced into schools, or to the attention of other young people, valuable discoveries have been made to enrich the treasure of science, or to furnish new sources of industry and of wealth, both to individuals and the nation. If once introduced into all our schools, the whole country would be put under the most minute and rigid examination, and compelled to yield up its treasures, now buried beneath the surface of the earth. In New-England, alone, from one to two hundred thousand young, but ardent and efficient surveyors, might be induced to afford their gratuitous and cheerful services, to explore our resources in the mineral kingdom; and while they amused and instructed themselves, they would make important accessions to the public treasures of science and of wealth.

8. As the adoption of geology as a branch of common education, uniformly leads to a thorough examination of the natural features of the country, it would prepare the way for obtaining maps of all the towns where it should be introduced.—Considering the trifling expense at which lithographic prints of town maps can be procured, and the important vehicles they would be to convey a minute and accurate knowledge of the character and resources of our country to the minds of its inhabitants, few subjects better deserve the immediate attention of every town.

9. No science is more practical. It acquaints farmers with the nature of their soils, and the best methods of improving them; civil engineers with the materials for constructing roads, canals, railways, wharves, dams, &c., and the proper method of combining them; artists with the origin and nature of paints, and other substances in common use; and the miner when and how to extend his researches, pointing him to a reward for his labors, and guarding him against abortive attempts.

Agriculture, internal improvements, manufactures, and the various useful arts, occupy, at present, so large a place in public attention, as to render every method which can be adopted to advance them worthy of public and private patronage.

10. The introduction of geology into schools, would tend to promote moral improvement among the young. Perhaps there are not two more unfortunate circumstances attending our system of popular education, than that the exercises of children in the school-room are irksome, and those for recreation are dissipating to the mind. If school-houses could be rendered places of pleasant resort, and amusement sources of useful instruction, the great work of reform in cultivating intellectual and moral taste would be fairly begun. The more innocent and useful amusements are scattered around the young, the less time and disposition they will have to pursue those which are pernicious or useless. No subject, perhaps, is better fitted to answer the double purpose of amusement and instruction, than geology. And few are better fitted to show the power and wisdom of Him, "who weighed the mountains in scales, and the hills in a balance."

11. It is easily acquired. The features of this science are not only striking and grand, but they are few and simple, and exactly fitted to entertain and expand the juvenile mind. By the aid of specimens, with appropriate descriptions, its general principles are more easily and readily understood, than those of any other science which is taught. Nothing is more easy than to introduce it into every district and private school in the country, and to acquaint every child with the names, ingredients and uses of the rocks he daily observes in his walks, and with the prominent geological features of our country.

12. It is neccessary. Without it, gazetteers and journals of travels cannot be understood. In some places, a knowledge of the great geological features of the earth is as common and familiar, as of the continents and oceans; and consequently, without this knowledge, a person is liable to find himself ignorant of the most common and familiar topics of conversation, in the society he will frequently meet. To be destitute of a branch of science so important and accessible, is to be unprovided with a great source of mental occupation and entertainment for early life; and in the case of teachers, the want of it is the want of a powerful and happy means of influencing the youthful mind.

If it should be asked how this science can be most readily introdnced into schools, it is answered, from numerous experiments, that fifty or a hundred labelled specimens, with some small manual to describe them, explaining their ingredients, uses, &c., are sufficient to make a beginning, which, if once made, seldom, if ever, fails to be extended to a general knowledge of the subject.

WONDERS OF CHEMISTRY.—Aquafortis and the air which we breathe are made of the same materials. Linen, and sugar, and spirits of wine, are so much alike in their chemical composition, that an old shirt can be converted into its own weight in sugar, and the sugar into spirits of wine. Water is made of two substances, one of which is the cause of almost all combustion or burning, and the other will burn with more rapidity than almost any thing in nature. The famous Peruvian bark, so much used to strengthen stomachs, and the poisonous principle of opium are formed of the same materials.—*N. E. Farmer.*

The prudent practice of insuring lives is spreading rapidly, for in 1831 a Company had insured thirty-seven lives; in 1832, fifty three; in 1833, one hundred and eighty three; and in 1834, five hundred and four.

CONTENTS OF THIS NUMBER.

Improvement of the soil—Silk culture—Horticultural Society—State Colonization Society—On Draught—Gama Grass—On Tillage and its principles—Parasite of the Honey Bee—Management of Bees—Ticks on Sheep—Horses and Crows—Morus Multicaulis—Rhubarb—Dialogue between vegetables—Seed wheat—Straw for manure—Geology in common schools—Wonders of chemistry—Insuring lives—Prices Current—Advertisements.

BALTIMORE PRODUCE MARKET.

☞ *These Prices are carefully corrected every* MONDAY.

	PER.	FROM	TO
BEANS, white field,	bushel.	2 00	2 50
CATTLE, on the hoof,	100lbs.	5 50	6 50
Slaughtered,	"	3 00	4 00
CORN, yellow,	bushel.	63	64
White,	"	60	— —
COTTON, Virginia,	pound.	16	17½
North Carolina,	"	—	—
Upland,	"	—	18½
FEATHERS,	pound.	35	37
FLAXSEED,	bushel.	1 50	—
FLOUR—Best white wheat family,	barrel.	6 00	1 75
Do. do. baker's	"	5 50	6 00
Do. do. Superfine,	"	4 75	5 00
Super Howard street,	"	—	4 75
" " wagon price,	"	—	4 62
City Mills, extra,	"	—	5 12½
Do.	"	—	4 87
Susquehanna,	"	—	—
Rye,	"	—	—
GRASS SEEDS, red Clover,	bushel.	4 75	5 25
Timothy (herds of the north)	"	2 50	3 50
Orchard,	"	3 00	—
Tall meadow Oat,	"	2 00	2 50
Herds, or red top,	"	1 25	—
HAY, in bulk,	ton.	— —	—
HEMP, country, dew rotted,	pound.	6	7
" water rotted,	"	7	8
HOGS, on the hoof,	100lb.	5 75	6 50
Slaughtered,	"	—	—
HOPS—first sort,	pound.	15	—
second,	"	13	—
refuse,	"	11	—
LIME,	bushel.	30	33
MUSTARD SEED, Domestic,	"	5 00	6 00
OATS,	"	30	33
PEAS, red eye,	bushel.	—	— —
Black eye,	"	87	1 00
Lady,	"	100	—
PLASTER PARIS, in the stone,	ton.	3 00	—
Ground,	barrel.	1 37	—
PALMA CHRISTA BEAN,	bushel.	1 50	1 56
RAGS,	pound.	3	4
RYE,	bushel.	—	—
TOBACCO, crop, common,	100 lbs	4 25	5 00
" brown and red,	"	5 00	7 00
" fine red,	"	7 00	9 00
" wrappery, suitable for segars,	"	6 00	12 00
" yellow and red,	"	8 00	12 00
" yellow,	"	9 00	12 00
" fine yellow,	"	12 00	16 00
Seconds, as in quality,	"	4 00	5 00
" ground leaf,	"	5 00	9 00
Virginia,	"	5 00	10 00
Rappahannock,	"	—	— —
Kentucky,	"	6 00	9 00
WHEAT, white,	bushel.	1 05	1 10
Red,	"	1 00	1 02
WHISKEY, 1st pf. in bbls.	gallon.	28½	29½
" in hhds.	"	28	—
" wagon price,	"	24½	25
WAGON FREIGHTS, to Pittsburgh,	100 lbs	— —	1 75
To Wheeling,	"	—	2 00
		washed.	*unwash*
WOOL, Prime & Saxon Fleeces,	pound.	50 *to* 60	24 *to* 26
Full Merino,	"	44 50	22 24
Three fourths Merino,	"	37 44	22 24
One half do.	"	33 37	22 24
Common & one fourth Meri.	"	30 33	20 22
Pulled,	"	31 33	22 24

BENE SEED.

JUST RECEIVED at this Establishment, and for sale, by the pound or in 12½ cent papers, a small quantity of the seed of this most valuable plant. It is very efficacious in the Bowel Complaints of children, and not difficult to be administered. The seed should be planted in April, in hills like beans, and the leaves will be in perfection in June. Two or three leaves being put into a tumbler of spring water, for 10 or 15 minutes, convert it into a mucilage, which being tasteless, children readily drink.

BALTIMORE PROVISION MARKET.

	PER.	FROM.	TO.
APPLES,	barrel.	$3 00	$5 00
BACON, hams, new,	pound.	11	— —
Shoulders,	"	8	9
Middlings,	"	—	—
BUTTER, printed, in lbs. & half lbs.	"	25	37
Roll,	"	15	25
CIDER,	barrel.	—	—
CALVES, three to six weeks old	each.	3 00	6 00
COWS, new milch,	"	17 00	30 00
Dry,	"	6 00	10 00
CORN MEAL, for family use,	100lbs.	1 50	—
CHOP RYE,	"	1 50	—
EGGS,	dozen.	19	20
FISH, Shad, salted,	barrel.	5 75	6 00
Herrings, salted, No. 1,	"	4 75	— —
Mackerel, No. 1, 2 & 3,	"	5 12	7 00
Cod, salted,	cwt.	2 50	3 00
LAMBS, alive,	each.	1 25	2 00
Slaughtered,	quart'r	31	50
LARD,	pound.	8	9
ONIONS,	bushel.	62	75
POULTRY, Fowls,	dozen.	1 50	2 25
Ducks,	"	—	2 50
POTATOES, Irish,	bushel.	40	62
Sweet,	"	—	—
TURNIPS,	"	37	50
VEAL, fore quarters,	pound.	3½	4
Hind do.	"	6¼	—

ADVERTISEMENTS

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PROPRIETORS of the Linnæan Botanic Garden and Nurseries, announce the following Catalogues, with greatly reduced prices. Catalogues, which are distributed gratis on application, post paid.

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No. 4. American Indigenous TREES, SHRUBS and PLANTS, pp. 50.
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No. 6. Do. do. do. in French
BOOKS—Prince's Treatise on Horticulture, 75 cents
" " on the Vine, $1 50
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GRAPE VINES of various kinds, at $3 per dozen, and $20 per hundred, and upwards.

RASPBERRIES, of fine kind, at from 5 to $8 per hundred.

Large red, and large yellow Antwerp, large red Barnet, Taylor's Paragon, and Beehive RASPBERRIES, at $16 per hundred, or $2 1-2 per dozen.

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Double Dahlias, each distinct by name, selected by us, at $3, 4 1-2 and 6 per dozen.

☞ Orders sent direct per mail, will be executed with pointed attention, and shipped or forwarded precisely as directed. feb 24—3t

CLOVER SEED AND SEED OATS.

350 bush. Clover Seed
2500 do Seed Oats, for sale in lots to suit purchasers, by LUTHER J. COX,
feb 17 4t Corner Calvert and Pratt st.

FRESH GARDEN SEED.

THE Subscriber has just received by the ship Canada a splendid assortment of English and Dutch Garden and Field Seeds. The respectability of the gentleman by whom these seeds were raised warrants me in recommending them with perfect confidence. But to be certain of the quality and to prevent disappointment to purchasers, proof samples of each sort are taken and will be fully tested in hotbeds prepared for the purpose.

The most prominent received are—

600 lbs. Cabbage Seed, principally of Early Scotch York, Large York, Bullock's Heart, Early George, Sugar Loaf, Drum Head and Flat Dutch. The above named Early York is the dwarf or short stalk variety raised by one of the first Gardeners near Edinburgh.

500 lbs. Mason's short top scarlet, red, and white Turnip, long white and salmon Radish Seed.

50 lbs. Salsafy or Vegetable Oyster.

8 bushels broad Windsor, long pod, and other English Beans.

10 lbs. Early and Late Cauliflower Seed, raised from the large Dutch Cauliflower. The quality of this seed may be estimated by reference to the Cauliflowers, whose merits received the premium from the Horticultural Society last year.

10 lbs. Brocoli Seed, finest English sorts.

100 bushels Early and Marrowfat Peas, among which are Bishop's early Dwarf, Spanish Dwarf Fan and Knight's Dwarf, Honey, all fine new sorts, very prolific and growing, only 12 inches high.

375 lbs. Early Dutch Turnips, white Tankard, Yellow Bullock, White Globe and Dale's new Hybred Turnip Seed.

15 lbs. Borecole or Kale Seed of various sorts.

FIELD SEEDS.

30 bushels St. Foin or Espersett and Field Burnett; Spring Vitches or Tares; 100 lbs. Mangold Wurzell; 10 bushels early Potatoes; 5 best English sorts; 10 bushels English Lawn Grass; 200 lbs. Mustard Seed; 15 bushels Perennial Ray Grass; 300 lbs. Rape or Cole Seed; 20 bushels English Oats; 3 best sorts; 300 lbs. white Dutch Clover; 360 lbs. Lucerne; also a small parcel of Yellow and Scarlet Trefoil, &c.

IN STORE.

Parsnip Seed, Carrot, Lettuce, Beet, Cress, Cucumber, Cantaloupe, Onion, Squash, Corn Salad, Artichoke, Swiss Chard, Celery, &c. Nearly all the last named Seeds were raised by R. S. Senr. at the Clairmont Nursery, and are of the finest quality.

Orders for Fruit Trees, Shrubs and Plants received. For particulars, see catalogues; to be had gratis.

ROBERT SINCLAIR, Jr.
At Sinclair & Moore's Maryland Agricultural
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No. 16 S. Calvert street, Baltimore, Md.

COMPRISING a Stock and Experimental Farm; a Nursery and Seed and Flower Garden; a Store for the sale of Field and Garden Seeds and Agricultural Implements and Books; a general Agricultural and Horticultural Agency; the Publication Office of the "Farmer & Gardener, and Live Stock Breeder & Manager," and of "Hints to Farmers;" and an Office of APPLICATION for Farmers, Gardeners, Overseers, Managers, &c.

I. IRVINE HITCHCOCK, *Proprietor.*

This establishment is now in full and successful operation, nearly every department, especially that of seeds, being well supplied with articles of the most desirable quality.

Orders by wholesale or retail will be promptly executed on terms that cannot fail to give entire satisfaction to purchasers.

As the limits of an ordinary advertisement preclude the possibility of conveying an adequate idea of the variety and the value to the cultivator and dealer in seeds, of the contents of this establishment, a comprehensive and descriptive PROSPECTUS AND CATALOGUE has been printed and will be sent gratis to any gentleman who will transmit to the proprietor his address (post paid) for that purpose.

BULBOUS ROOTS.

HYACINTHS, Tulips and a general assortment of Bulbous Roots, suitable for the present season, for sale low at this establishment by
Oct. 28. I. I. HITCHCOCK.

THE FARMER & GARDENER;

AND LIVE-STOCK BREEDER & MANAGER.

CONDUCTED BY I. IRVINE HITCHCOCK, AND ISSUED EVERY TUESDAY FROM THE AMERICAN FARMER ESTABLISHMENT, AT $5 PER ANNUM, IN ADVANCE

No. 45. BALTIMORE, MARCH 10, 1835. Vol. I

☞This publication is the *successor* of the late

AMERICAN FARMER,

which is discontinued,) and is published at the same office, at five dollars per year, payable in advance.

☞When this is done, 50 cents worth of any kind of seeds on hand will be delivered or sent to the order of the subscriber with his receipt.

American Farmer Establishment.

BALTIMORE: TUESDAY, MARCH 10, 1835.

MONTHLY STRAWBERRY.

New Haven, (*Con.*) *Jan.* 10, 1835.

To the Editor of the Farmer and Gardener:—

SIR—At the proper time for transplanting the *monthly strawberry*, (Spring) I shall forward some to you as you request.

My stock originated from *seed* obtained from plants imported from France. I have also some of the French vines, but they are worthless—that is, they are poor bearers. Those from the seed bear very abundantly, unless checked in their growth by severe drought. In dry weather, therefore, they should be *watered freely.*

The mode of cultivation, which I have found most successful, is to transplant early in the spring, (every spring) parting the bunches into as small portions as practicable, leaving a small root upon each portion. A bunch will furnish about twenty roots. These are set, if in a border for edging, six inches apart—if in a bed, ten inches apart. They are hoed sufficiently to keep down the weeds, and require no other care except watering in dry weather.

The soil should be rather poor. A good coat of *fresh horse manure*, containing a good deal of litter, should be dug in, so as to be *buried about five inches under the surface.* Unfermented manure, with a mixture of straw, thus buried, appears to yield the best supply of food in the latter part of the season, when the plants most require it.

The soil of my garden is a light sand. Treated as above described, this strawberry produces more (taking the seasons through) than any other that I am acquainted with.

I am, sir, with much respect,
yours, &c.
NOYES DARLING.

To I. I. HITCHCOCK, Esq.

HORTICULTURAL BOOKS.

To the Editor of the Farmer & Gardener.

Sir—Several valuable works of this class have been recently published, and appear to meet with a general appreciation, by those interested—of their utility there can be no doubt, as their tendency to diffuse a correct taste and a more general knowledge of the matters of which they treat, is apparent to all.

Among the popular publications on horticultural subjects, none, we believe, havebeen received with more approbation, than the treatise published by Mr. Prince, of Flushing, a few years since—as it contains a mass of information in a small compass, and its descriptions supplied a desideratum of useful and interesting reading to the purchaser, as well as cultivator of ornamental plants.

A new edition of this work,—omitting those parts which the author has ably supplied in separate and exclusive works,—with short and concise descriptions of all ornamental trees, plants, flowers, &c., as have been introduced since the last edition was issued, or were omitted in that, would, no doubt, be received with favor by all admirers of the floral kingdom. It would afford a fund of useful matter, which the rapidly increasing taste for horticulture demands, and add another wreath to the chaplet, which the author has so deservedly earned by his publications, on this and kindred subjects. P.

ORIGIN OF "HERBEMONT'S MADEIRA GRAPE."

To the Editor of the Farmers' Register.

* * * Since I wrote to answer your inquiry, I have learned a little more concerning the origin of the vine called "Herbemont's Madeira." It certainly has been received from France, under different names, and also from Madeira. It is most undoubtedly one of the most esteemed families of vines in Europe. In certain situations in this country, Charleston for example, it does most admirably well. It has been received from France by the names of "Muscat gris," "Pineau," and "Maurillon." I have not yet been able to learn by what name it has been received from Madeira. It changes some of its characters so much in this country, as scarcely to be known again—for here it grows to the size and vigor of our strongest native vines. The nomenclature of the vines is, in Europe, in such a chaotic state, that it would take the labors of at least twenty Hercules to clear it up. Now that this culture is fairly begun in this country, we should be very particular with our names; and confusion in nomenclature is frequently inextricable, at the same time that it is exceedingly disadvantageous to the cultivators. The names should be short, if possible, and unchanged after they have been adopted. I would suggest, for example, that the excellent kinds introduced by the names of "Norton's Virginia Seedling," and "Cunningham's Prince Edward," be simplified, by suppressing every thing but the names of the gentlemen entitled to the honor of naming them. N. HERBEMONT.

[From the Cultivator.]

SINGULAR APPLICATION OF GRAFTING.

New-Paltz, Nov. 3, 1834.

Sir.—I have a very valuable apple tree which had the bark eaten off a few inches above the ground, by mice, in the winter, and I took the following method to save the tree. I took four small twigs from another tree, and engrafted them below the wound, in the manner of side grafting, and loosening the bark above, bent the twigs and split them under the bark until they came parallel with the body, then covered them well by banking the dirt above the wound and grafts. I left the earth around one season, then cleared it away, and found two had taken. These have commenced to form new bodies, and the tree, from all appearances, is as thrifty as ever, and the twigs have grown in two years to the bigness of your thumb.

I am, dear sir, your humble servant,
ABRAHAM STEEN.

To J. BUEL, Esq.

Green Vegetable Manure.—The value of green vegetables as manure was strikingly proved by me in the spring of 1833. I had a trench opened of sufficient length to receive six sets of potatoes; under three of these sets I placed green cabbage leaves, but the other three had nothing but the soil. When the crop was dug up, the plants over the cabbage leaves yielded about double the produce of the other.—*J. D. Parks, Dartford Nursery, January*, 1835,

A Frenchman by the name of Bilot, is said to have invented a machine which will discharge 120,000 balls, of half a pound each, at one shot.

A rail road is proposed between Portland, Me and Montreal, Canada. The route is said to be favorable.

THE FARMER.

[From the Southern Planter.]

ON MANAGEMENT OF FARM DUNG.

As the indispensable necessity of repeated applications of *dung*,—that is to say, putrescent animal, and vegetable matters, for recruiting and preserving the fertility of the earth,—is universally admitted, every means by which the quantity of this important substance may be enlarged, or its efficacy, increased must be a valuable acquisition. By a careful consideration of scientific principles, and applying them according to circumstances, the attentive husbandman may adjust his own practice; enlarge the quantity, and improve the quality of his farm dung; and thus add to the fertility of the country.

Sir Humphry begins with vegetable substances, and shows that green succulent plants contain the largest proportion of easily soluble matter. He recommends, therefore, that they be ploughed into the ground while they are still fresh and green about the time of their flowering. But it must be remembered, that the generality of green plants can be used to greater advantage than that of ploughing them immediately into the ground as manure. Besides, if the plants are to be raised on the ground which they are destined to manure, that ground must either be possessed of a tolerable share of fertility, or the plants must be of a puny growth, and the quantity of manure thus obtained inconsiderable. Hence it is evident, that a great part of the substance of which these plants are composed, must be derived from the soil; and ploughing in the plants is not a great deal more than restoring to it that of which it had been recently robbed.

Dry straw, that is the stems of plants; dried and hardened in the air, is justly represented as widely different from tender green plants, being possessed of little easily soluble matter, and much woodly fibre. To overcome the resistance to solution which this substance has acquired, it is commonly submitted to some kind of firmation; and Sir Humphry expressed his doubts of the propriety of indisciminately adopting this practice, recommending rather to cut straw small and keep it dry, till it be ploughed into the ground. So long as farmers must keep live stock, and not only supply them with variety of food, but, for the sake of health and cleanliness, accommodate them with a comfortable bed of litter, it is not probable that there will much straw remain even of the worst quality, to be used in the manner here recommended. But it may not be improper to take under consideration a prescription so directly opposite to ordinary practice.

Sir Humphry does not here give explicit reasons for prescribing the application of unfermented straw as manure, reserving these till he come to treat of composite manure. He only says, that "though it would produce less effect at first, yet its influence would be much more lasting;" which no doubt would be the case. But the farmer expects a prompt return. The soil, indeed, is continually consuming all dead animal and vegetable substance committed to it; and, gradually reducing them to total dissolution, absorbs the dissolved matter, and yields it again for the nourishment of growing plants. But when such substances are dry, they imbibe moisture partially, and the decomposition is languid and slow. If, however, a quantity of straw, steeped for some days in water, till it becomes soft and pliant, be put in the ground, two or three inches under the surface, any plant, growing over, or contiguous to it, will in a short time assume a deep verdure and vigorous growth and grow for some years with remarkable luxuriance after the conformation of the straw is annihilated and no traces of it left.—Hence it would appear, that straw soaked and supplied in water, would be preferable to straw; for though, by the force of fermentation, the component principles of vegetables are disengaged; and such as are capable of taking a gaseous form, are dissipated committed to the ground; yet they would ferment more freely in the ground, by being first well soaked in water, and Sir Humphry approves of a slight incipient fermentation, for which the presence of water is requisite. As straw alone, however, is seldom used as a manure, any farther consideration of process of fermentation, and its effects, may be waved till we come to composite manure, which chiefly occupies the attention of the farmer. For the same reason, the judicious remarks of this celebrated author, on manures from animal substances, may be passed.

The dung of horses, cattle, sheep, &c. is itself a composite, consisting of animal matter mixed with the undigested fibres of their food; and we are informed, that it yields nearly the same products as vegetable substances. This substance is always less or more moist when voided; and if continued so, soon decomposed and disappears in the soil with which it is mixed; but if suddenly dried, will keep in perfect preservation for a long time, and almost lose its peculiar fetor; it will even long preserve the same appearance when afterwards buried in the moist earth. The dung of live stock is still more compounded by the straw and offals which have served for their litter; and this mixture forms the dung-hill, on which the farmer depends for renovating the fertility of the soil. The management of the substance, in such a manner as to render it most efficient, is therefore of great importance; and on this, we are favored with the opinion of this illustrious philosopher. "A slight incipient fermentation" says he, "is undoubtedly of use in the dunghill;" (and indeed it is unavoidable;) "for by means of it, a disposition is brought on, in the woody fibre, to decay and dissolve when ploughed into the soil."—And again: "Too great a degree of fermentation is very prejudicial to the composite manure of the dunghill; it is better that there should be no fermentation at all before the manure is used, than that it should be carried too far." To form a candid judgment of this opinion, it seems proper to take a view of the putrefactive fermentation, in those varieties which circumstances produce.

The three great agents of fermentation—water, a warm temperature, and air, have each their peculiar effect, as their presence is less or more abundant. If fermentable substances are immersed in water, the process goes on very slowly; the parts of the subject are rather separating, than the component principles disengaging; and this is accelerated by heat. When the subject is exposed to the free access of the air, a hot fermentation quickly commences, which is most rapid in a warm temperature, and when there is just moisture enough to keep it alive. Thus circumstanced farm dung quickly consumes, more than half, perhaps, of its bulks escapes in vapor and gas; and what remains, by being rendered less soluble, must yield less support to vegetation. Our senses may convince us, that such is the case, if we will take the pains to make use of them, and should overcome the prejudice so generally prevalent, for wasting both the bulk and value of farm dung by fermentation, before it is ploughed into the ground. It is vain to attempt to check the rapidity of fermentation in dung, thus exposed to the influence of that process, by watering, as Sir Humphry justly observes, for when it is lain up open to the air on all sides, no more water will adhere to it, than serves to hasten its consumption.

Some degree of fermentation will indeed be ever operating in this highly putrescible substance, before it can be carried to the field; but it is more economical to controul, than to accelerate it. The component principles might then be preserved almost entire, and turned into the ground in that state. As fermentating proceeded a genial heat would be raised in the soil; the volatile principles escaping, get directly to the support of vegetation; and the more refractory parts would be gradually dissolving, and both yielding food to plants, and mending the construction of the soil. To allow the fermentation, Sir Humphry prescribes covering dung with compact earth, so as to seal it up from the access of the air, having first dried it as much as possible. In this, he is perhaps, not quite correct. Turning it over to be dried, would provoke the fermentation; and it would be impossible to make it so dry as to be incapable of fermenting. Besides, as the fermentation is most violent when water is present in a low proportion, the consumption would be rapid, and the residue of little value. But the dunghill, which is daily augmenting, cannot be sealed up. The prescription for its site is more commendable. He directs that it be shaded as much as possible from the rays of the sun, and that it be an excavation, paved in the bottom, from which no water can spontaneously escape. If all the dung litter, and every kind of refuse putrescible matter, about a farm, be successively collected into such a place, blended together, and regularly spread with a level surface over the whole space, the mass can then be duly compressed, to exclude the too free admission of air. Over this, any urine of the live stock, which the litter has not absorbed, chamberley, and every kind of foul water, should from time to time be sprinkled, and when these are not sufficient, plain water should be added, to keep the surface always quite moist. When farm dung is managed in this manner, all its parts being brought nearly in contact by compression, and the small interstices filled with liquid, the fermentation is restrained, and the manure is suffering very little loss, either in bulk or fertilizing quality;—at the same time, it is undergoing a very important preparation. The fibres, soaked in putrid water, though not consumed, are much weakened; the cohesion of the parts is relaxed; the

elasticity destroyed, and the mass is fitted to dissolve in the soil, and yield abundant nourishment to growing vegetables, the volatile and moist soluble parts not having been previously dissipated by a powerful fermentation. If a quantity of farm dung be taken out of a wet dungstead, and laid loosely up to the air, it will be cool at first; but heat will soon be generated; it will smoke violently, and emit very pungent effluvia; which may convince any one, that the value of the manure has been preserved by being kept in that situation.

From a dungstead of this description, where all the different matters are blended together, closely compressed, and equally soaked with putrid water, different sorts, to suit different soils or purposes, cannot be taken; but one sort suitable for all soils and crops, will be more valuable than all the possible sorts or varieties. It is believed, that farm dung, managed as above, may be successfully applied to every kind of soil. Soils, indeed, which are dry and friable, and easily disposed to fall into fine mould, sooner operate the decomposition of unfermented dung, than those which are cohesive, and more retentive of water, but such dung, by fermenting in the soil, has a powerful effect in mellowing soils of the latter description.

REPORT

By Mr. Sherrard of Morgan county, from the Select Committee, to whom was referred certain memorials from Morgan, Frederick and Shenandoah Counties, praying for a Geological survey of the State of Virginia, with a view to the discovery and developement of its Geological and Mineral resources.

The select committee, to whom was referred sundry petitions from the counties Morgan, Frederick and Shenandoah, on the subject of a geological and chemical survey of the state, have had that subject under consideration, and respectfully report:

1. In looking to the example of other countries, as well as of several of our sister states, it would appear that great practical importance is attached to the geological and chemical enquiries which they have respectively instituted. In conjunction with extensive and minute topographical surveys, many of the governments of Europe have set on foot systematic and detailed enquiries into the geological features and mineral resources of their respective domains. France, Sweden, Russia, several of the German and Italian states, and Great Britian, have shewn great activity in pushing forward these investigations. The latter government especially, has distinguished herself by the most liberal and steady zeal in developing those natural resources of the land, which form the basis of her wealth and power. The ordnance map of Great Britian, which is yet only in part published, and which, besides topographical, contains also geological, details, is looked upon as a signal proof of the liberal spirit and practical wisdom of the government of that country. In this country likewise, a growing conviction of the great importance of such enquiries, has led several of the states to make provision for extensive practical surveys, on a plan somewhat analogous to those conducted in Europe. The survey of Massachusetts under the superintendence of professor Hitchcock of Amherst college, has already been completed, and judging from the immense mass of details, under the head of economical geology, embodied in his comprehensive report recently published in a very large octavo volume, there can be no doubt that the community for whose benefit the survey was undertaken, has been amply gratified by the important discoveries it has brought to light, and the valuable practical bearings of most of its details. In this report, we behold a state possessing but little variety of geological features, displaying an amount and diversity of resources, (in part until now undiscovered, and never before arranged so as to be understood,) which cannot be contemplated without pride and satisfaction. Maryland and Tennessee are following the wise example of Massachussetts, and there is reason to believe that New Jersey, Pennsylvania and New York will, either during the present or the next year, authorize similar undertakings. In the preliminary report of professor Ducatel of Maryland, will be found the most abundant evidence of the practical benefits which are to be anticipated from such researches.—Though based upon a merely superficial reconnoissance of the state, this valuable document developes a number of interesting facts in its geology, of which little or nothing had been previously known, and from which new impulses to the enterprise of extensive districts of the state, may be confidently expected to proceed. The subsequent report recently presented to the legislature of Maryland, embodying all the details of the first year's operations in regular survey, has not yet reached us, but from what we learn, the developements which it contains are of a character to enlist the wisdom and patriotism of the state very warmly in the prosecution of the survey. Of the practical utility of the researches now in progress in Tennessee, the published reports and other documents relating to the subject, speak in the most unqualified and encouraging language. The labours of professor Troost, to whom this survey has been committed, have already contributed a large amount of useful information relative to the mineral and agricultural resources of the soil of Tennessee. In the other states above alluded to, the adoption of similar measures for the investigation of their natural territorial resources, has been delayed from year to year by considerations of *economy*, to which the heavy debts accumulating in the prosecution of public improvements, have constrained them to defer. But no doubt appears to have existed of the real utility and highly important practical bearings of judiciously conducted geological and chemical surveys. Indeed, notwithstanding the heavy incumbrances under which some of those states are now labouring, projects of such surveys are at this time under discussion in their legislatures; and there seems to be no doubt, that either now or at some early day, the necessary provisions will be made for commencing the investigations desired.

2. Witnessing the valuable results of these researches in Europe, and in some parts of the United States, we should of course anticipate similar benefits from enquires of this nature conducted within our own territory. Nor would it be necessary, in order to feel convinced of the utility of such a survey as applied to Virginia, to refer in detail to those particulars in the physicial character of the state, upon which it would bear with the most direct and prominent advantage. All are willing to admit the great extent and value and diversity of our mineral wealth, and at the same time to confess that its distribution through our territory, its precise boundaries in any one locality, its exact nature as ascertained by science, and its susceptibility of economical and profitable application to the purposes of commerce, manufactures, and the arts of life, are matters of which scarcely any thing as yet has been accurately determined. The mere surmises of ignorance on the imperfect observations of the inexperienced explorers who have examined without any adequate lights to direct the investigations, appear to have furnished nearly all the knowledge upon these points, of which we have as yet become possessed. To feel thus assured of the existence of a great variety of mineral riches within our territory, and at the same time, except in a few instances, to have availed ourselves but little of the benefits it proffers, and to know but little of its position, nature or extent, are certainly in themselves powerful reasons for the adoption of some scheme of systematic, minute and extensive research. But, however obviously the advantages of such surveys might be inferred from these considerations, in connection with the acknowledged benefits which other states have derived and are deriving from them, your committee have felt it incumbent to enquire more particularly into the specific bearing which enquiries of this nature would have upon all the great divisions of our territory. In attending to this point, a number of interesting particulars have come to their knowledge, some of which are perhaps not generally known, and all of which still further confirm them in the belief, that such a survey as the one in question, cannot fail to prove eminently advantageous to our state. Most of the facts here referred to, have been discovered by mere accident, and by persons seemingly unconscious of their importance; consequently, little or no improvement of them has been made, and no researches undertaken to ascertain their real exent or value. In adverting to the beneficial application of such a survey to the several great divisions of our territory, your committee feel at liberty to touch only on some of the more prominent particulars in which its utility would be felt; and, indeed, it is only in the actual progress, or at the completion of the investigation, that the most important of its practical bearings can be appreciated and understood. Discoveries of great general interest and of invaluable local importance, would, there is reason to believe, reward even the earlier efforts of those connected with the enterprise; and districts of the state, at present almost deserted from supposed meagreness of resources, would behold spread out beneath their soil, the rich earths, which were soon to diffuse fertility over their hills and plains, or the valuable rocks and ores from which enterprise was to derive new incentives to exertion.

3. Commencing with the tide water portion of the state, your committee would remark, that the vast marine deposit of shells and other calcareous matters which underlie a great part of this region,

may be considered practically, as well as in a scientific aspect, as one of the most important features in the geology of the state. The exhausted soils of mrny of the eastern counties, are already exhibiting the most astonishing proofs of the fertility which this calcareous matter is capable of bestowing, and it may be confidently expected, that when a more extensive and systematic attention to the employment of this manure shall have been adopted throughout eastern Virginia, a degree of agricultural wealth and prosperity will be realized, of which a few years since, or even at this time, it would be difficult to conceive. To the rapid, general and successful extension of this ameliorating system, there can be no doubt that a geological and chemical examination, extended to all the eastern counties, would be in a high degree conducive : in most of them marl has already been discovered : cliffs of it appear on all our rivers, and sometimes for miles, an uninterrupted bed of this precious manure forms one or both of the confines of the stream. But of the composition of its numerous varieties, of the districts which they severally occupy, and of the value of various earths with which they are associated, but little general or systematic knowledge has been acquired. To one individual, the able editor of the Farmers' Register, the state is indebted for nearly all that has been done on the subject. But how important would it be to investigate the extent and character of this deposit more minutely ; to trace it upwards from its first appearance near the mouths of our rivers ; then, by transverse lines, to explore all the counties in its range, and at each step of the investigation to ascertain its agricultural value by chemical analysis.

Within the tide-water district also, but in a region to which the common marl does not generally extend, another deposit of even higher fertilizing properties than the former has recently been discovered. This substance, called green sand, from its consisting of granular particles of a green aspect when dry, is geologically an *older deposit* than that which embodies the ordinary shell marl. In the beds of the latter, however, in many situations, a very large per centage of the green sand has been discovered, and the value of marl is believed to be much increased b the presence of this ingredient. The extent of this immense green sand deposit is yet conjectural, but that it reaches, with perhaps no interruption, from the Potomac to the Roanoke, may be confidently asserted. It shews itself on our rivers at a distance varying from a few miles to 20 or 30 from the head of tide, and it may be interesting to remark that the geologist of Maryland, guided by the experience of those who ascertained its existence in Virginia, has recently discovered a continuation of the deposit thoughout the neighboring state. Of its relative value in the different localities, nothing is yet known ; respecting the depth and breadth of the deposite, scarcely any thing has been ascertained. Here then would be an important field of geological and chemical enquiry, and one in which the agriculture of lower Virginia could not fail to be deeply interested.

Associated with this deposit, and generally forming the superior stratum, is an extensive formation of selenite or gypsum. Whether this be an invariable attendant of the green sand, is of course undetermined, since of that deposit so little is yet known—but so far as observation has yet extended, it would seem to be a general associate of the green sand, specimens from the Potomac, Rappahannock, Pamunkey and James rivers, agreeing in containing some portions of gypsum.

In this region too, a variety of clays suitable to different species of pottery, are known to exist, an examination of which would doubtless lead to the introduction or extension of an important branch of industry. *Alum earth* and *copperas earth*, of which immense quantities are found in Maryland, and applied to the manufacture of alum and green vitriol, exist also in this part of our state, and probably in great abundance. Bog iron ore, one of the most valuable of all the ores of that metal, would also be met with extensively. Bordering on this region, at its upper limit, a variety of valuable products might be expected. In the south especially, the *secondary* rocks immediately adjacent to the *granite* ledge, would be deserving of particular attention. In this vicinity might be anticipated a third deposit of fertilizing marl, identical in position with the gunpowder marl of New Jersey. A stratum of magnesia earth has, within a few years, been discovered at one point along this line—and it is not improbable that its value, either in agriculture or in the manufacture of epsom salts, may lead hereafter to its profitable employment. Chemical examination would determine the value of these various matters, and new incentives might thus be given to the manufacturing enterprise of this portion of the state. The several varieties of water furnished by springs and wells would also form a subject interesting to health, and in other respects practically useful.

4. The space extending from the granite ledge t the Blue Ridge, embracing all the varieties of primary rock, containing the yet imperfectly traced gold region, the bituminous coal fields, and a vast variety of other mineral wealth, is next to be considered. Here, to trace out the gold region entirely through the state, would be an important and useful work. From what is already known of this deposit, there is every reason to augur its great extent and value. Indications of this metal have been found even in Goochland, and at other points far removed from the supposed line of the formation. A systematic enquiry on the subject would evidently result in much practical advantage, not only by opening up new discoveries, but by preventing those ruinous expenditures which are occasionally incurred for want of the proper guides to enquiry and research. The coal fields of Goochland, Chesterfield and Powhatan, from which eastern Virginia has already reaped so many benefits, would present a most interesting subject of geological examination. To ascertain the dips and convolutions of the various strata overlying and subjacent to the coal, and to investigate more attentively than has yet been done, the line of out crop connected with the coal, might lead to discoveries of no small importance to the prosperity of the state. That the real extent of those coal beds is not yet accurately known, is evident from the discovery of indications of this mineral in situations at some distance from any of the workings ; for instance, on the line of the contemplated Richmond and Fredericksburg rail-road.

In Prince Edward too. bituminous coal is found, and there is reason to believe that the seam from which the specimens have been derived, forms part of a very extensive basin of this mineral.—Nor is it improbable that between the Richmond and Prince Edward deposits, and in the same geological range towards the north, this valuable mineral might be brought to light. Among the granite and feldspar of the region we are now considering, valuable deposits of porcelain clay are already indicated. A stratum of this substance is known to exist in the vicinity of Charlottesville, and specimens have recently been obtained from a bed in Goochland, which in appearance, give promise of considerable value. That this earth will be found in many places throughout the region referred to, there can be no doubt. The rock feldspar, from which it is produced by the slow action of the elements, is an important constituent of our granite, and exists in some places in a separate mass. It is with this rock that the earth is mingled in certain proportions in the fabrication of porcelain ; and the very beautiful material of this nature, now so successfully manufactured in Philadelphia, is formed of the clay and feldspar procured in the vicinity of that city and Wilmington, localities in the same geological range with the region in our state to which we now refer.

In this region too, will be found valuable beds of iron ore of various kinds, some of which are already known and wrought. Serpentine and magnesian rocks also occur, in connection with which the valuable ore from which chrome yellow is manufactured, may be expected to exist.—In the vicinity of the South-west and Buffalo mountain, on both sides, a variety of important minerals are embedded. The shale of this ridge in Amherst and other places, yields, by the action of the atmosphere, great quantities of green vitriol, which impregnating the water as it filters through the rock, gives rise to some of the most powerful chalybeate springs in the United States. To the east of this ridge a belt of blue limestone appears, which would seem to be a continuation of the Potomac marble. From the continuity of this narrow vein through Maryland, high up into Pennsylvania, it would appear to constitute a very important feature in the geology of this district.—It crosses the Potomac, and rises in one or two places before it appears very distinctly at Everettsville, and then shows itself very abundantly in Amherst, where it is associated with marble of superior quality. On the eastern side of this belt, is a large vein of flint, which experience shows to be equal to the common gun flint. Copper occurs very abundantly on the west side of the Buffalo ridge, and would probably be found interruptedly in same range throughout the state. In the continuation of this line, it is found abundantly in Maryland, associated with iron and manganese. These metals would appear to be associated with it in Amherst. The vein of copper in this county was largely worked prior to the revolution, and the impression prevails that a valuable per centage of gold is contained in the ore.—Such is the fact in regard to a copper ore which is now wrought in New Jersey, and analysis might be usefully directed to this point with reference to the Virginia ore. The particulars here stated are

only a few of what might be gleaned from the personal observations of intelligent farmers or scientific tourists, who have paid attention to the geology of this region, but they are abundantly sufficient, in the mind of your committee, to evince the advantages which this section of the state would derive from systematic geological and chemical enquiry.

5. The valley of Virginia would offer a multitude of valuable discoveries, and among them extensive beds of coal would certainly be numbered. The anthracite recently discovered in the counties of Berkeley, Augusta and Morgan, and the extensive mines of bituminous coal of Hampshire, indicate what may be anticipated from minute and judicious research. If we look to the inexhaustible deposites of this precious mineral, which the enterprise of Pennsylvania has brought to light, and with which, perhaps, more than any other of her vast mineral resources, she is now building up the permanent fabric of her wealth and power, with what satisfaction should we welcome a discovery which, properly improved, may lead to an equally enviable condition of prosperity in one of the loveliest and richest sections of our state. In this region, the noble ranges of the North and Warm Spring mountains, with their numerous subsidiaries, would furnish an almost unexplored field to the geologist. Valuable metallic ores, in addition to those already discovered, and new medicinal springs, would here reward his labours. The sandstones, limestones, slates and marbles, yet reposing unbroken in the hills, would all be subjects of interesting observation. He would examine also the rich saline deposit of the caves, and the gypsum with which it is sometimes abundantly associated. The beautiful and copious fountains in the Warm Spring valley, including the Warm, Hot, Sweet, Alum and other springs, would claim his scientific scrutiny. The other waters, such as those of Bath in Morgan county, and Augusta, would also be examined. These and a variety of other objects to which geological and chemical enquiry might be profitably directed in this region, have an importance which must give peculiar interest to the prosecution of such researches in the great valley of Virginia.

6. Beyond the Alleghany we behold a region of almost unparalleled natural riches. Here we have the vast bituminous coal formation of the west, as extensively displayed as in Pennsylvania; and in addition, salines and a gypseous formation with which even New York cannot compete.—The immense strata of this region, sweeping with a gentle inclination from the mountains, extend far west, until they reach the Mississippi in nearly horizontal planes. The ocean that once rested on this vast tract, besides the legible impressions of his former sway, visible in almost every rock, has left deep in the earth, and in some places extending to its surface, the rich treasures of salt with which his waves were once freighted. In some places, as at Abingdon, this saline matter would appear to exist beneath in massive form.—Amid the spurs of the Alleghanies are abundant evidences of coal: metallic ores, among which may be enumerated lead and iron, are also found in this western region. Here, too, are poured out many of those healing waters to which crowds of invalids now annually resort. In a word, this portion of the state teems with matters of interesting enquiry. Yet it is only at a few points that its treasures have been opened up, and but little certain is yet known of their relative arrangement, of their extent, or their comparative value. This vast territory is destined by its mineral riches alone to become at some future day, one of the most prosperous and wealthy districts of the state, and no part of Virginia is more deeply interested in procuring a geological survey.

7. Besides the numerous points of enquiry alluded to in the above brief review of our territory, there is one investigation which would be applicable to all sections of the state, and which would undoubtedly contribute to the general benefit of our agriculture. We refer to a systemtic analysis of all the important varieties of soil within the state. This would be a work of great labour, but would unquestionably repay the state one thousand fold.

8. Keeping permanently in view the peculiar practical bearings by which such a survey should be directed, a proper attention should also be paid to those general and scientific relations, which the progress of the investigation would disclose. In many instances, the generalizations of science would be found of great utility in guiding observation; and the determination of many interesting questions of a purely scientific nature, would be incidental to the practical researches of the geological and chemical enquirer. The relative ages of all the great formations of the state, might eventually be made out; the periods at which disturbing causes, at many points, broke up and contorted the stratification, and the relations of the various agencies which have formerly been in operation in our territory to those now in action, both as to quantity and kind, would all be elucidated in the progress of the survey. The geologists of Europe, are so well aware of the interest that attaches to this portion of the United States, on account of the diversity and extent of its formations, that they are, at this moment, looking with impatient anxiety for some systematic effort to unfold its true physical character, and to bring fully to light the treasures that lie hidden beneath its surface.

In the execution of the proposed geological and chemical survey, your committee would observe, in conclusion, that the most advisable plan would seem to be, to divide it into two parts: namely, 1st. A geological reconnoissance of the state, with a view to the general geological features of our territory, and to the chemical composition of its soils, minerals and mineral waters: and, 2d. A detailed geological survey of the various sections of the state. The first part of the plan would possess of itself a separate and independent value, would be attended with but little expense, and would furnish to a succeeding legislature, the most satisfactory means of estimating the value of a detailed survey, and of deciding of pausing at the point to which we should then have attained, or of proceeding directly to the execution of the entire scheme.

In conformity to these views, and with the object of advancing directly to the accomplishment of the first part of the plan, your committee beg leave, respectfully, to repor the accompanying bill.

THE BREEDER & MANAGER.

[From the Library of Useful Knowledge.]

THE AMERICAN HORSE.

In the extensive territory and varied climate of the United States, several breeds of horses are found.

The *Canadian* is found principally in Canada, and the Northern States. He is supposed to be of French descent, and many of the celebrated American trotters are of this breed. We will speak of some of them when we describe the paces of the horse.

The *Conestoga* horse is found in Pennsylvania and the middle states—long in the leg and light in the carcass—sometimes rising seventeen hands, used principally for the carriage; but when not too high, and with sufficient substance, useful for hunting and the saddle.

The *English* horse, with a good deal of blood, prevails in Virginia and Kentucky; and is found, to a greater or less degree, in all the states. The Americans have, at different times, imported some of the best English blood. It has been most diligently and purely preserved in the Southern States. The celebrated Shark, the best horse of his day, and equalled by few at any time, was the sire of the best Virginia horses; and Tally-ho, a son of Highflyer, peopled the Jerseys.

In the back-settlements, and in the south-western states, is a horse resembling the wild horse of the Pampas, already described, and evidently of the same origin.

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The Flemish and Dutch Horse.—The *Flemish & Dutch* horses are large, and strongly and beautifully formed. We are indebted to them for some of the best blood of our draught-horses, and we still have frequent recourse to them for keeping up and improving the breed. They will be more particularly described when the cart-horse is spoken of.

SHEEP HUSBANDRY.

We take the following observations on Sheep Husbandry from Silliman's Journal, 1824. It is contained in a "Notice of an excursion among the White Mountains of New Hampshire, &c. with miscellaneous remarks by James Pierce."

"From their elevation and latitude, the grazing lands situated in the northern part of New England, are best adapted for sheep. The great consumption of fodder incident to long winters, so objectionable to the raising of cattle, is more than compensated to the merino sheep proprietor, by an improvement in the quantity and quality of wool, which is much affected by climate. In tropical countries, sheep are *dressed* with hair—in more temperate, the wool is generally short and coarse, but longer and finer in cold regions. In Spain, two and a half pounds of wool, is the average product of their merinos, and of a quality inferior to ours—in the middle States, and valley of the Hudson, the same; on the elevated ground in the western part of Connecticut and Massachusetts—three, and in some flocks, four pounds.—

In the southern and middle part of Vermont, from four to four and a half. In Maine the average is five; and in a few choice flocks, six pounds the sheep. The best merino wool of Europe, is from the bleak mountains of Saxony. The quantity and quality of wool is also considerably affected by the food, management and selection of flocks, as nature bountifully provides a dress for all animals according to their wants. Furs are found to be good, and thestaple long, in proportion to coldness of climate.

"The northern parts of the United States and Canada, in addition to climate, have for the raising of wool, an important advantage over England, and the south of Europe, in cheapness of soil—much land being required for the support of sheep. The fee simple of good sheep farms in America, can be procured with the amount of the annual rent and taxes of the same quality of ground in England."

[From the Turf Register.]

BIG-HEAD IN HORSES.—A CURE.

Mr. Editor:—In looking over your January number for the present year, I saw an inquiry from a Plain Farmer, requiring some information relative to the big-head in horses. I will say to him that it is not only a cure for big-head, but also big-jaw and shoulders, I have known it to cure many valuable horses. I have no *doubt* of the disease be-in scrofula.

TREATMENT.—*Bleed freely once a week;* for three or four weeks give best corn. Put one ounce of the Bi-chloride of Mercury, (better known by the name of corrosive sublimate,) in one pint of alcohol, let it digest, then rub the part affected twice a day, morning and evening, until the part blisters well, then anoint the part with sweet oil, in a few days it will commence healing, then repeat the application once or twice more, and the horse is cured without the least scar or in the least disfigured. M.

[From the same.]

DISEASE IN A YOUNG POINTER.

Fredericksburg, Va., Jan. 27th, 1835.

Mr. Editor:—Though personally unknown to you in your public capacity, as the conductor of a Sporting Magazine, I feel well acquainted. I have a young dog, (a pointer,) of great promise and value, which has beentaken with a disease known here as the jerks. It appears as the sudden contraction of the muscles of a limb. It proceeded, as I am induced to believe, from a slight attack of the common distemper. If you know of any remedy or could send me any pamphlet treating of the disease, you would confer a lasting favor on one who is fond of the pointer to extravagance, and who would most willingly oblige you in any possible way. Yours,

J. M. P.

[We do not know that this dreadful effect of that most terrible disease, the distemper, can be cured. It were better to touch still deeper the spinal marrow, and put an end at once to his disorder and its miseries. This nervous affection results, no doubt, from some injury of the spine. We have lately saved the life of a very splendid young dog, presented to us by Mr. T. P. Gaskill of Philadelphia, by the valuable recipe communicated by a correspondent. *Common salt*, a table spoouful dropped at the root of the tongue and the mouth kept closed until it dissolves. It will vomit *immediately;* if not sufficiently relieved, repeat the dose the next day or day after.]

THE GARDENER.

[From Cobb's Silk Manuel.]

CULTURE OF THE MULBERRY TREE.

The only appropriate food for the silk worm is the leaf of the mulberry tree. It should be the first business therefore of the silk grower, to provide himself with the source of a constant supply of mulberry leaves. The greater his supply of this article, the greater will be his crop of silk, as the eggs of the insect are procured to any amount with ease and cheapness. Having the eggs of the insect, and a sufficient quantity of food at hand, ordinary care on the part of the proprietor will ensure a good crop. It is now abundantly proved that there is no great obstacle in the soil or climate of there United States to raising silk to a vast amount. As there is a difference in the quality of the mulberry leaves for raising silk, it should be the object of the cultivator to propagate the best kind. The white mulberry has been found superior to the purple or native red, and the plants are easily produced from the seed.

The white mulberry tree differs from the red in its general appearance. The bark is smooth and of a lighter colour. The leaves are thinner, smaller, and of a lighter green colour. The fruit is of a whitish gray colour, and of a vapid sweetness to the taste, and is of little value for the table compared with the black. But the silk insect prefers red, the Tartarian species, or the paper mulberry, and it has been found upon experiment, that if these different species are given at the same time to the insect, it will eat the white first. This species came originally from China, and it is said that it is always used in China.

The Seed of the Mulberry.

One ounce of good seed will be sufficient to produce 5000 trees. The seed is easily obtained from the fruit in the following manner. When the fruit begins to ripen, every morning the tree should be shaken, and the fruit that falls gathered with that which had fallen before; if enough is not gathered in one morning, several successive gatherings may be collected; but the fruit should not be kept over three or four days before the seed is extracted, which may be done by putting the fruit into a tub and mashing it till the berries are completely worked into a common mass. Then pour water into it and stir it briskly, and the pulp may be separated from the seed. Then pour off the water, with all the seed that floats, (for that is worthless,) and renew the washing till the seed is clean, when it may be drained, spread out on cloths, and dried in the shade. When perfectly dry, it should be put into a tight vessel, and kept in a dry place. It should never be exposed to the light, air or dampness, more than is absolutely necessary. The seed may be obtained at a reasonable rate at most of the seed stores, and I have bought it in Mansfield, Conn. at the rate of a dollar per pound.

Sowing the Seed, choice of Soil, &c.

A soil rich, warm and mixed with much mould, is recommended as the most proper for a nursery of mulberry trees. New shoots should have ground easy to penetrate. The ground should be ploughed the preceding fall, and again ploughed two or three times in the spring, and made light and friable; two or three dressings of manure well ploughed in would be of essential service; the ground may be levelled with a hoe or rake, and the seed sown in drills about the first of May, much in the same way as our farmers sow carrots. The weeds must be carefully destroyed, and in dry times watering will be beneficial. I have sown the mulberries in July, and they have sprouted and come on rapidly, but the frosts of winter in our climate (New England) have been too severe for them. I would recommend to sow the seed in the spring. From the quarter of an acre of ground the last season, I had over 10,000 plants, produced from seed sown in the spring in the way above-mentioned, some of them upwards of a foot in height. Those that are intended for transplanting may be taken up in the fall, and put out of the way of frost in a cellar, the roots being covered with loam. Those left standing may be covered with light manure or old hay. The frost will be apt to kill the young and tender tops, but the shoots will start from the bottom in the spring with great luxuriance. The seed plant is undoubtedly best, both for food, for worms, and duration: it is also the most convenient mode of getting the trees, as seed enough can be sent by mail to any part of the Union to produce an orchard sufficient to feed several millions of worms. I cannot believe that any other mode can be pursued to much advantage in this country; but as some may be fond of trying experiments in other modes of culture, the following are laid down as sometimes used in Europe.

(To be continued.)

SILK CULTURE AND MANUFACTURE.

WASHINGTON CITY, Jan. 27th, 1835.

To the Editor of the Albany Argus:

The exhibition of Mr. Gay, to which I alluded in a former letter, of machinery for the reeling and manufacture of silk, continues to excite great interest here. The more this subject is examined, the greater its importance to the country appears. All the writers, heretofore, who have treated it, have considered the *manufacture* of silk as a branch which might be introduced into this country at some remote period; but, that we could not engage in it under a series of years.—They have urged the great importance of the culture of silk, as an article of exportation; and they seem to have taken for granted that any effort on our part to manufacture it must prove abortive and ruinous. The same was formerly said of cotton and wool: but experience has already shown, that American genius is altogether adequate to any undertaking of this kind. Our cotton and woollen goods are considered fully equal to those of foreign manufacture, and in some instances, successfully compete with them in foreign markets. It may be said that we ought to establish in our country the culture of silk before we attempt its manufacture. The one is undoubtedly desirable if the other cannot be attained. But if both can be introduced, at the same

time, it is still more desirable—for the culture and manufacture are reciprocally beneficial to each other; the former as contributing to furnish the raw material for the latter; and the latter as furnishing a sure and convenient market for the former. If the manufacture be established, it could be supplied with raw silk from abroad, until the domestic supply should be sufficient. The very fact of its establishment would greatly encourage the culture, and be the means of furnishing a supply of the domestic material much sooner than it could otherwise be expected.

The only question then is, whether we can engage in the manufacture, relying temporarily for a partial supply of the raw material from abroad. This question, I think, is fully answered by the experiment already made by Mr. Gay, in his manufactory at Providence. He has used silk imported from Canton, and produced fabrics which are pronounced by competent judges to be superior to the same kind of goods of foreign manufacture; and he avers they can be thus made at a fair profit. Why then shall we not start the manufacture as well as the culture? England has introduced the manufacture of silk at great expense. The peculiarity of her climate does not permit the culture of it. It has become one of the most important branches of her national industry. Several years since it was estimated that England paid for raw silk from abroad, about $9,000,000. The amount at this time is probably much greater. France, too, although her climate enables her to grow silk to a great extent, imports the raw material to an amount exceeding $20,000.000. If American ingenuity can attain the art of manufacturing silk, it would seem that there ought to be no obstacle to our engaging in it. Mr. Gay claims to have made material improvements in the machineay for reeling as well as weaving. He is about taking out patents for those improvements.

There is no reason why American invention should not improve this, as it did the cotton machinery. Every encouragement should be given to such laudable undertakings. Few men of capital are willing to embark their means in any branch of industry, unless it promises a fair profit in return. Individuals might be induced to contribute, moderately, and unite for the purpose of such an experiment. This can only be done by companies authorised by law for that purpose, thereby combining the necessary means to make the experiment, which individual enterprise or individual associations could not accomplish. This subject is becoming one of vast importance to the United States, and every facility should be afforded to aid and encourage the enterprise of those who are willing to engage in it.

Potatoes.—Experiments with potatoes have been carried on, with great care, in the Horticultural Society's garden, for some years past, and the results given in two papers, by Dr. Lindley, the last of which is just published in part vi. of the Hort. Trans., vol. i. second series. From this paper it appears that the opinion entertained by Mr. Knight, and a number of other persons, of the superior production of whole tubers over sets, is unfounded. The same result, it is stated, has also been arrived at by Sir George Mackenzie, from experiments made by him at Rosshire. Other instances will be found in our First Additional Supplement to our Encyclopedia of Agriculture, just published.—*Loudon's Magazine.*

Leaves of Potatoes.—Leaves piled up in a pen, with alternate thin strata of swarmp mud, when partially decomposed, are found a superior preparation for the Irish potatoe crop. Put around the roots of fruit trees, this compost has been found to produce a healthy and vigorous growth. Its operation has been much increased in its efficacy, by the addition of lime to the mass. The finest Irish potatoes that I have seen produced in a southern clime were produced by the addition of this compost.

MISCELLANEOUS.

NEW ICE BOAT.

[From the N. Y. Courier and Enquirer.]

We have to-day received an acconnt of an experiment made during the last week by R. J. Stevens, Esq., to whose scientific improvements and discoveries in mechanics and untiring industry, our country and the world is more indebted for its travelling facilities than to any living individual. It appears that Mr. Stevens has invented an apparatus, by which a boat may be driven, with certainty and safety, through ice of any thickness, and for which he is aboat taking out a patent.—This, we are gratified to learn, is no matter of speculation or mere theory,—the apparatus has already been applied to the steamboat Newark, and the result was, that she made her way through the fresh water ice of the Newark bay (where she had been frozen in during the cold weather) with the greatest ease. Since that time she has continued her regular and daily trips to Newark.

In view of the various and beneficial results which must flow from this invaluable discovery, we look upon it as second only in importance to the invention of steamboats and rail roads. It will effect a rapid and salutary change in our business and commercial arrangements, by enabling us to continue the intercourse with our sister states at a season, in which heretofore there has been little or none; and we venture to predict, that for the future no stoppage of the intercourse between New York and any place south of it, need take place by reason of the ice. If this contrivance answers the expectations of the scientific and unpresuming inventor—and those who know him, know he is not much given to boasting, or to be sanguine over much—we may soon look forward to make the winter passage to Albany, with the same ease and certainty we make the summer one. Baltimore, Philadelphia, Brunswick, Newark, and various other places, will feel the value of this improvement; but to our own gay and thriving Gotham—our "Sea Girt Isle"—this only was wanting to secure to her forever, the pre-eminence to which her situation and resources entitle her. Mr. Stevens has rarely, if ever, taken out a patent for his numberless improvements in steam engines, which have increased the speed of our boats from six to sixteen miles an hour; but they have heretofore been freely given to such as chose to adopt them. We hope, therefore, that he may be enabled in this case, so to word his specification (no easy matter) as to reap the advantages the law was intended to confer upon those who devote their time and talents in improvements, by which so many are benefitted.

AMERICAN STONE—A NEWLY DISCOVERED CEMENT.—Longinus never made a truer remark than when he said a "democracy was the cradle of science." The unfettered mind, expanding to its utmost power of extension, under free laws and institutions, developes powers that lie dormant and repressed beneath the chains of a monarchy and despotism. Discoveries and inventions are created in the combinations of thought, which seem almost magical and supernatural compared with the results of intellectual operations in governments of force. Our own country has demonstrated the truth of these remarks in her Franklin, her Fulton, Whitney, and many others, and in the astonishing rapidity with which she has applied and improved upon almost every useful art.

We now come to record another remarkable invention, which has before been slightly alluded to, but of which we can now, from our own personal observation of the specimens, and from further information obtained from the inventor, speak in more positive terms.—Mr. Obadiah Parker, a native of New Hampshire, and for many years past a respectable resident in Onondaga county, in our state, and now in this city, has, after numerous experiments, discovered a composition stucco or cement—which, from a state of liquid mortar, hardens in a few days—say eight or ten—into a solid substance or stone, as impenetrable almost as granite, and susceptible of a beautiful polish. It is, apparently, chiefly of a calcareous nature, or like the hardest kind of marble. Any color may be given to it; and it not only defies, but actually acquires greater density and solidity, and less brittleness, under the changes of the atmosphere. He has obtained a series of patents—and at Catskill, recently built, as a specimen, the wall of a small edifice eight feet high, which in eight days—recalling to mind the fable of Medusa, was perfectly *petrified* with its door, windows, &c, all of which is testified to by the owner to us personally, and by the certificate of the judges of the county and the principal citizens of the place. It is impossible to foresee the consequences of such a discovery. It surpasses, without doubt, all other cements; and the material is so cheap, that entire houses, of any shape or dimensions, fortifications, canals, aqueducts, &c. may be thus built up in a few days, which would utterly supersede brick and stone, and effect a complete revolution in architecture. What will not art yet imitate and accomplish?—*N. Y. Star.*

CONTENTS OF THIS NUMBER.

Monthly Strawberry—Horticultural Books: Prince's treatise on Horticulture—Herbemonte's Madeira Grape—Singular Grafting—Green Vegetable Manure—Scraps of Intelligence—Management of Farm Dung—Geological Survey of Virginia—The American Horse—the Flemish Horse—Sheep Husbandry—Cure for big head in Horses—Disease of a young Pointer—Culture of the Mulberry—Silk Culture and Manufacture—Potatoes—Potatoe Leaves—New Ice Boat—American (artificial) Stone.

BALTIMORE PRODUCE MARKET.

☞ *These Prices are carefully corrected every* MONDAY.

	PER.	FROM	TO
BEANS, white field,	bushel.	2 00	2 50
CATTLE, on the hoof,	100lbs.	6 00	6 50
Slaughtered,	"	3 00	4 00
CORN, yellow,	bushel.	62	——
White,	"	60	——
COTTON, Virginia,	pound.	16	17½
North Carolina,	"	——	——
Upland,	"	17¼	18½
FEATHERS,	pound.	35	37
FLAXSEED,	bushel.	1 25	1 50
FLOUR—Best white wheat family,	barrel.	6 00	1 75
Do. do. baker's	"	5 50	6 00
Do. do. Superfine,	"	4 75	5 00
Super Howard street,	"	4 87	4 94
" " wagon price,	"	4 75	4 81
City Mills, extra,	"	——	4 94
Do.	"	——	4 87
Susquehanna,	"	——	——
Rye,	"	——	——
GRASS SEEDS, red Clover,	bushel.	5 00	5 25
Timothy (herds of the north)	"	2 50	3 00
Orchard,	"	3 00	——
Tall meadow Oat,	"	2 00	2 50
Herds, or red top,	"	1 25	——
HAY, in bulk,	ton.	——	——
HEMP, country, dew rotted,	pound.	6	7
" water rotted,	"	7	8
HOGS, on the hoof,	100lb.	5 75	6 50
Slaughtered,	"	——	——
HOPS—first sort,	pound.	15	——
second,	"	13	——
refuse,	"	11	——
LIME,	bushel.	28	30
MUSTARD SEED, Domestic,	"	5 00	6 00
OATS,	"	30	33
PEAS, red eye,	bushel.	——	——
Black eye,	"	87	1 00
Lady,	"	100	——
PLASTER PARIS, in the stone,	ton.	3 00	——
Ground,	barrel.	1 37	——
PALMA CHRISTA BEAN,	bushel.	1 50	1 56
RAGS,	pound.	3	4
RYE,	bushel.	——	——
TOBACCO, crop, common,	100 lbs	4 25	5 00
" brown and red,	"	5 00	7 00
" fine red,	"	7 00	9 00
" wrappery, suitable for segars,	"	6 00	12 00
" yellow and red,	"	8 00	12 00
" yellow,	"	9 00	12 00
" fine yellow,	"	12 00	16 00
Seconds, as in quality,	"	4 00	5 00
" ground leaf,	"	5 00	9 00
Virginia,	"	5 00	10 00
Rappahannock,	"	——	——
Kentucky,	"	6 00	9 00
WHEAT, white,	bushel.	1 05	1 15
Red,	"	1 02	1 05
WHISKEY, 1st pf. in bbls	gallon.	30	31
" in hhds	"	29½	30
" wagon price,	"	26½	26
WAGON FREIGHTS, to Pittsburgh,	100 lbs	——	1 75
To Wheeling,	"	——	2 00
		washed.	*unwash*
WOOL, Prime & Saxon Fleeces,	pound.	52 *to* 62	24 *to* 26
Full Merino,	"	46 52	26 26
Three fourths Merino,	"	39 46	29 26
One half do	"	35 39	25 26
Common & one fourth Meri.	"	32 34	22 24
Pulled,	"	33 35	23 26

BENE SEED.

JUST RECEIVED at this Establishment, and for sale, by the pound or in 12½ cent papers, a small quantity of the seed of this most valuable plant. It is very efficacious in the Bowel Complaints of children, and not difficult to be administered. The seed should be planted in April, in hills like beans, and the leaves will be in perfection in June. Two or three leaves being put into a tumbler of spring water, for 10 or 15 minutes, convert it into a mucilage, which being tasteless, children readily drink.

AGRICULTURAL IMPLEMENTS, GRASS SEEDS, &c.

SINCLAIR & MOORE offer for sale at the Maryland Agricultural Repository, Light street, near Pratt street wharf, a general assortment of PLOUGHS of the most approved kinds, adapted to the different kinds of lands and various purposes of the farmer.

Among them are the self-sharpening Plough, which has the advantage of a moveable steel point from 15 to 24 inches long, which can be reversed, as a bevel is formed by wearing, and advanced as it becomes shorter, so as to bring into actual wear from 12 to 18 inches of solid wrought bar—of assorted sizes, from the small seed plough to large three horse.

Wood's patent Plough, of assorted sizes, with cast shares

Sinclair & Moore's improved do do do do

McCormick's improved do do wrought shares

Barshear, from 1 horse to heavy 3 horse, do do

Cary Plough, having the shape of the old well known Cary, but has a cast mould board and wrought share —2 sizes

BuffaloPlough, a well formed mould board for stiff lands, with cast shares

Double and single shovel Ploughs. ALSO,

Cultivators, with wrought and cast tires

Do do made to expand

Harrows of different sizes and forms

Wheat Fans, from 15 to $35

Corn Shellers of the best patterns

Cylindrical Straw Cutters, 20 inch box, adapted to horse or water power, capable of cutting 75 to 100 bushels per hour, price $75

14 inch box hand power, 45

11 inch do do do 27

And a general assortment of small articles—such as Hay and Manure Forks: Spades; Shovels; Mattocks; Picks; Hoes; Trace Chains; Hames; Straw Knives.—Also, Thompson's superior cast steel Axes, and other Tools, wove Wire for fans, screens, cellar windows, &c.

FIELD SEEDS—Clover, timothy, herds, orchard grass, tall meadow oat grass seed, and millet seed at lowest market prices—150 bushels prime seed oats.

March 10.

WILLIAM PRINCE & SONS,

PROPRIETORS of the Linnæan Botanic Garden and Nurseries, announce the following Catalogues, with greatly reduced prices. Catalogues, which are distributed gratis on application, post paid.

No. 1. Fruit and Hardy Ornamental TREES, SHRUBS and PLANTS, pp. 90.

No. 2 Bulbous and Tuberous rooted PLANTS, double Dahlias, &c., pp. 24.

No. 3. Greenhouse Trees, Shrubs and Plants, pp. 44.

No. 4. American Indigenous TREES, SHRUBS and PLANTS, pp. 50.

No. 5. A Catalogue of Garden, Agricultural and Flower SEEDS

No. 6. Do. do. do. in French

BOOKS—Prince's Treatise on Horticulture, 75 cents

" " on the Vine, $1 50

Prince's Treatise on Fruits, or Pomological Manual, containing accurate descriptions in detail of about 800 varieties of Fruits, in two vols. - - - 2 00

The Books and Catalogues can be transmitted by mail at a postage of 1 1-2 to 2 1-2 cents.

Chinese Mulberry, or Morus Multicaulis TREES, at $25 per hundred, or $4 1-2 per dozen, and cuttings $6 per hundred.

GRAPE VINES of various kinds, at $3 per dozen, and $20 per hundred, and upwards.

RASPBERRIES, of fine kind, at from 5 to $8 per hundred.

Large red, and large yellow Antwerp, large red Barnet, Taylor's Paragon, and Beehive RASPBERRIES, at $16 per hundred, or $2 1-2 per dozen.

Large Dutch CURRANTS, $12 per hundred, or $2 1-4 per dozen.

Largest Lancashire GOOSEBERRIES, comprising all the choicest varieties and colors, $20 per hundred or $3 per dozen.

Double Dahlias, each distinct by name, selected by us, at $3, 4 1-2 and 6 per dozen.

☞ Orders sent direct per mail, will be executed with pointed attention, and shipped or forwarded precisely as directed. feb 24—3t

FRESH GARDEN SEED.

THE Subscriber has just received by the ship Canada a splendid assortment of English and Dutch Garden and Field Seeds. The respectability of the gentleman by whom these seeds were raised warrants me in recommending them with perfect confidence. But to be certain of the quality and to prevent disappointment to purchasers, proof samples of each sort are taken and will be fully tested in hotbeds prepared for the purpose.

The most prominent received are—

600 lbs. Cabbage Seed, principally of Early Scotch York, Large York, Bullock's Heart, Early George, Sugar Loaf, Drum Head and Flat Dutch. The above named Early York is the dwarf or short stalk variety raised by one of the first Gardeners near Edinburgh.

500 lbs. Mason's short top scarlet, red, and white Turnip, long white and salmon Radish Seed.

50 lbs. Salsafy or Vegetable Oyster.

8 bushels broad Windsor, long pod, and other English Beans.

10 lbs. Early and Late Cauliflower Seed, raised from the large Dutch Cauliflower. The quality of this seed may be estimated by reference to the Cauliflowers, whose merits received the premium from the Horticultural Society last year.

10 lbs. Brocoli Seed, finest English sorts.

100 bushels Early and Marrowfat Peas, among which are Bishop's early Dwarf, Spanish Dwarf Fan and Knight's Dwarf, Honey, all fine new sorts, very prolific and growing, only 12 inches high.

375 lbs. Early Dutch Turnips, white Tankard, Yellow Bullock, White Globe and Dale's new Hybred Turnip Seed.

15 lbs. Borecole or Kale Seed of various sorts.

FIELD SEEDS.

30 bushels St. Foin or Espersett and Field Burnett; Spring Vitches or Tares; 100 lbs. Mangold Wurzell; 10 bushels early Potatoes; 5 best English sorts; 10 bushels English Lawn Grass; 200 lbs. Mustard Seed; 15 bushels Perennial Ray Grass; 300 lbs. Rape or Cole Seed; 20 bushels English Oats; 3 best sorts; 300 lbs. white Dutch Clover; 360 lbs. Lucerne; also a small parcel of Yellow and Scarlet Trefoil, &c.

IN STORE.

Parsnip Seed, Carrot, Lettuce, Beet, Cress, Cucumber, Cantaloupe, Onion, Squash, Corn Salad, Artichoke, Swiss Chard, Celery, &c. Nearly all the last named Seeds were raised by R. S. Senr. at the Clairmont Nursery, and are of the finest quality.

Orders for Fruit Trees, Shrubs and Plants received. For particulars, see catalogues; to be had gratis.

ROBERT SINCLAIR, Jr.

At Sinclair & Moore's Maryland Agricultural
March 3. Repository, Light near Pratt street.

SUPERIOR CATTLE FOR SALE,

OF the Devon, and Devon & Short Horn blood, at Brookland Wood Farm, the residence of Richard Caton, ten miles from Baltimore, on the Susquehanna Rail Road, and on the Falls Turnpike Road, consisting of

Devon Bulls, Heifers and Calves, of all ages of each denomination, from 8 months to 4 years—price, forty to one hundred dollars each, according to age and quality.

Devon and Durham Bulls, the offspring of Devon Cows, by the Short Horn Durham Bull Tecumseh. It is supposed by those persons in England who have dairies of this species, that they will be found superior to all others, uniting the beauty of form, hardiness of constitution, propensity to fatten, and richness of milk appertaining to the Devon blood, and product of milk of the Durham—price, forty to one hundred dollars. Apply to

Feb. 3, 1835. THOMAS BEVAN, Manager.

GAMA GRASS SEED

JUST received, and for sale at this Establishment—Price 50 cents per ounce.

The Invoice including packing mats, &c. amounts to $30, and the whole will be sold for $20, which may be sent to

I. I. HITCHCOCK.
Amer. Farm. Estab.

CLOVER SEED AND SEED OATS.

350 bush. Clover Seed
2500 do Seed Oats, for sale in lots to suit purchasers, by

LUTHER J. COX,
feb 17 4t Corner Calvert and Pratt st.

THE FARMER & GARDENER

AND LIVE-STOCK BREEDER & MANAGER.

CONDUCTED BY I. IRVINE HITCHCOCK, AND ISSUED EVERY TUESDAY FROM THE AMERICAN FARMER ESTABLISHMENT, AT $5 PER ANNUM, IN ADVANCE

No. 46. **BALTIMORE, MARCH 17, 1835.** **Vol. I**

☞This publication is the *successor* of the late

AMERICAN FARMER,

(which is discontinued,) and is published at the same office, at five dollars per year, payable in advance.
☞When this is done, 50 cents worth of any kind of seeds on hand will be delivered or sent to the order of the subscriber with his receipt.

American Farmer Establishment.

BALTIMORE: TUESDAY, MARCH 17, 1835.

EGYPTIAN OR SOLID STEM WHEAT.—A subscriber requests information where the seed of this variety can be had. Will any gentleman who has it, or who knows where it can be obtained, please to communicate the information to the editor.

BRIEF HISTORY OF CONFLAGRATIONS.—At least nineteen-twentieths of the fires that occur, particularly in winter, are caused *by depositing ashes in wooden vessels.* OBSERVER.

THE HORTICULTURAL REGISTER *and Gardener's Magazine*, No. 3, for March, has just reached us. We do not often take upon ourselves to recommend sources of information to our readers, but this work seems to us to deserve commendation in an extraordinary degree. We give one of its articles almost every week in our columns, but our readers may rely upon it there is more where these come from of equal excellence. Indeed we can hardly be content that any lady or gentleman who is fond of gardening should remain ignorant of the value of this work—and then it is so *cheap*—only $2 00 a year. Address George C. Barrett, the publisher, Boston, or the conductor of this paper.

Extract from a letter to the Editor, by a Correspondent in Alabama.

My object in keeping garden and field seeds, is to produce a taste for gardening, raising fruit, and bestowing some more attention to live stock;—but I do assure you that it is an arduous undertaking. Speak to some men here, whose income from their farms is from eight to twenty thousand dollars a year, about taking your paper, his answer nine times out of ten is,what good will "book farming" do me—I know enough, and those at the north can teach me nothing but what I already know. Poor fools! they have not yet entered the horn book of farming—but the time will soon come, when they will be done with their newspaper politics—throw aside such slang and trash, as now inundates our land, and hail them as their best friends who can show them any good in farming.

There is a large portion of the land in this country prairie—the stratum of which, a few inches below the surface, is lime, and a little clay. The surface is a composition of lime, clay, and vegetable matter—and from the destructive course pursued in cultivation, the fertilizing parts will become exhausted and leave a redundency of lime; sterility must necessarily follow. In fact, no land can remain productive long, when there is a crop taken from it every year, and no return made, as is the case in this country. Talk to a man about saving manure, unless it is for his "collard patch," and he would doubt your sanity; that is, those on prairie lands. It is time some who have not been so unfortunate as to be spoiled by this never-failing rich prairie land, began to know and feel the value of manure, of which cotton seed is the most frequently used, but it is said to be of short duration. Deep ploughing is but little known; such as is called deep ploughing in your section of country. The size of my sheet will not allow a detailed account of any particular agricultural operation, as pursued in this country, but which I will give you, as early as time will permit. I will here observe, however, that I am of opinion, that as a fertilizer of the soil, Cow Peas in the Southern States, will be nearly equal to Clover in the northern—sown broad cast and ploughed in lightly—suffered to remain until the peas begin to mature, and then turn them in with a large plough—put it down in small grain, and when gathered, repeat the pea dressing, and so continue as long as may be necessary.

RAISING CALVES.

Mr. L. Look, of Utica, gives in the Genesee Farmer, his experience in rearing calves. Instead of letting them run with the cows, he supplies them with a small quantity of milk, mixed with boiled potatoes and fine bran. When they are 3 or 4 months old, he feeds them with coarse bran, boiled potatoes, and warm water. With this food, he has been very successful.

HEAD DRESS.—In one of Miss Hannah More's letters, written in 1777, we find the following.

"The other night we had a great deal of company, eleven damsels, to say nothing of men. I protest, I hardly do them justice, when I pronounce that they had, among them, on their heads, an acre and a half of shrubbery, besides slopes, grass-plats, tulip beds, clumps of peonies, kitchen gardens, and green-houses." In a note it is observed that Garrick put an end to this incredible but fashionable folly, by appearing in the characters of Sir John Brute, dressed in female attire, with his cap decorated with a profusion of every sort of vegetables,—an immensely large carrot dependant from each side.

SOWING CLOVER SEED.

The following is the "P. S." of a letter from one of our subscribers; and we should esteem it a favor if all those who have occasion to write to us, would add to the brief announcement that they "enclose $2,00 for the 5th volume of the Farmer," some statement, be it ever so brief, in relation to their practices on any of the various subjects to which the Farmer is devoted. By so doing, a vast amount of information might be obtained from all sections of the country, which could not but be highly useful.

"On the subject of harrowing in Clover Seed, in the spring, on winter wheat, I have for several years been in the practice of sowing my seed after the ground gets so hard as not to cut up by the tread of the team,—say the fore part of April in common years,—and then put on a common two horse harrow, and go once over. When the Clover is in its first leaf from the seed leaf, I sow on one bushel of plaster to the acre; and I have never lost a crop of Clover since adopting this practice. Last spring I sowed about four bushels of seed; and in consequence of very windy weather, could sow but a little while in the morning. I did not finish until the first week in May, yet at harvest my Clover covered the ground. If sowed and harrowed as above too early, and the season favorable for Clover, it sometimes gets so large before harvesting, that it is in the way of the scythe, or rather it cuts in with the wheat, which is a damage.

"As to the advantage or disadvantage to the wheat crop, I think it almost as beneficial as the first dressing of Indian corn."

☞The writer of the above is respectfully solicited to become a contributor to the pages of the Farmer.—*Ten. Farmer.*

Ploughshares in men!—There is iron enough in the blood of forty-two men to make a ploughshare weighing about 24 pounds.

THE FARMER.

[From the Cultivator.]

In commencing the second volume of the Cultivator, and before the farming operations of the season have commenced, we are desirous of drawing the attention of our readers to some prominent objects of improvement in their farming operations. We know the distrust which farmers generally entertain to new practices in husbandry, and are fully apprized, that what we are about to offer forms already a part of the practice of many who will peruse our remarks. Yet if we should be instrumental in inducing a few, by adopting our suggestions, to improve the condition of their farms, and to render their labor more productive, our object will be effected, and we shall be satisfactorily compensation for our trouble. All we ask is, that our recommendations may have a fair trial, sufficient merely to enable the experimentor to judge of their utility, and on a scale that shall involve neither great labor nor expense. And we shall offer nothing which we have not ourselves tested, and believe beneficial. We will begin with

MANURES,

Which are the basis of all fertility in the soil, precisely in the same way that forage, grain and roots are the basis of fatness in our farm stock.—All animal and vegetable manures have once been plants, and are capable, by a natural process, of being converted into plants again. They should therefore be husbanded with care and applied with economy. Every crop taken from a field diminishes its fertility, by lessening the quantity of vegetable food in the soil. Unless, therefore, something in the form of manure is returned to the field, an annual deterioration will take place until absolute barrenness ensues. This fact needs no other illustration than is afforded by every bad managed farm. The object of the husbandman should be to INCREASE the fertility of his farm, because upon this materially depends the profits of his labor. To do this, we advise that cattle yards be made dishing, so as to collect the urine and liquids in the centre, and that these be kept well littered with straw, stalks, and the refuse vegetables of the farm, to take up and preserve these liquids, which are a valuable part of the manure:—That these yards be thoroughly cleaned in the spring, and, their contents, together with the manure from the stables and pig pen, applied to hoed crops, as corn, potatoes, beans, &c., before fermentation has progressed far;—that it be spread broadcast, ploughed in as fresh as possible, and the ground rolled or harrowed before planting.—Thus *all* the manure will be saved, the hoed crop greatly benefited by it, the weeds destroyed, and as much fertility left in the soil for the grain crop which is to follow, as the same manure would have afforded had it lain in the yard till after midsummer, and been then applied. But if manure *has* rotted, it may be applied to the turnip or small grain crop. In these cases it should not be buried deep, and may with advantage, at least on dry soils, be harrowed in with the seeds, where it serves frequently a beneficial purpose in protecting the young grain from the severity of winter.

DRAINING.

It is necessary, for the perfection of most crops, that they should enjoy all the benefit of our summer heats. When a soil is saturated with spring water, though water does not appear on the surface, the roots of the crop which grow upon it, penetrate the wet part, which may be supposed to possess a temperature never above 60 degrees. The crop consequently fails for want of the necessary heat in the soil. Decomposition of vegetable matter, the food of the crop, is also seriously retarded by this cold temperature. Stagnant waters are as unhealthy to cultivated crops as they are to animals. We have now in our mind an extensive inclined plane, which we examined last summer, of more than half a mile slope, embracing 70 to 80 acres, and possessing a rich soil, one-fifth of which was rendered unfit for tillage or the finer grasses, in consequence of springs which burst forth near the top of the plane, the waters of which passed down its whole extent, and principally in the soil, in gentle depressions or hollows. We are confident the evil here might be remedied at a slight expense, which would be remunerated in a single season, by draining. Grounds habitually wet, either from springs, or water stagnating in the soil, for want of declevity or drains to carry it off, will not produce good crops. Draining is an effectual cure for the evil. Open drains will alone answer to carry off surface water, and in situations where much water may occasionally pass. These should hardly ever be less than 3 feet broad at surface, and two feet deep; the sides sloping so as to leave the bottom 8 to 12 inches broad. A greater depth and breadth are often requisite.—Long experience has convinced us, that good drains, in the end, are always the cheapest drains; and that when they are well constructed, they constitute one of the most profitable improvements of the farm. But we consider under-drains, in soils which are habitually wet, cheaper, better and more profitable to the proprietor, either to carry off stagnant water from flat surfaces, or to arrest that proceeding from springs, than open drains. They are more efficient, because they generally lay deeper, and are not so liable to be choked up. They are more economical, because they seldom, if well made, require repairs, and do not waste any land. They are beneficial on all flat surfaces which have a retentive sub-soil, and upon all slopes rendered wet by springs. They are wanted wherever water, at midsummer, rests upon the subsoil, or saturates the soil, within the reach of the roots of cultivated crops. We do not here mean to discuss the principles, or describe the mode of draining, as we have published much upon this subject, and design to publish more, with such pictoral illustrations as shall serve to render the subject perfectly familiar to the readers of the Cultivator. A very simple means of determining whether a field is likely to be benefited by under-draining, is, in June or July, to dig a hole, like a post-hole, say two feet deep, and the presence of water at the bottom, and the height to which it rises, will at once decide whether the land is to be benefited, and to what extent, by under draining. Draining effectually is almost an untried experiment with us. We are not familiar with the process, and startle at the expense; yet if we compare the cost with the advantages which will accrue for a succession of years, we shall find the operation to be a very economical one.

N. B. Well drained grounds may be sown or planted ten to fifteen days earlier in spring than those which want draining, and the crops are much less liable to be injured by heavy rains.

CLOVER.

Will grow on pretty much all soils that have been laid dry by good drains. It is the basis of good farming, on all lands susceptible of alternate husbandry. Its benefits are threefold: it breaks, pulverizes and ameliorates the soil by its tap roots, and it furnishes a cheap food for plants as well as animals. A good clover lay is worth to a crop, by the food which it affords, as much as five tons of manure to the acre. To ensure a good lay, at least ten pounds of seed should be sown to the acre, and the ground well rolled. Its value, as food for plants, depends more upon the quantity of roots than upon the luxuriance of the stems, though the abundance of the latter will depend in a great measure upon the number of the former. To obtain the full value of this plant, we must cultivate it as a food for our *crops*, as well as our cattle; and in this case we should use it as such the first or second year, before it has run out.—There is economy in always sowing clover with small grains, though it is to be ploughed in the same or the next season. Ten pounds of seed costs upon an average one dollar—the labor of sowing is comparatively nothing. Its value to the next crop cannot be less than quadruple that sum, to say nothing of the feed it may afford, or its mechanical amelioration of the soil. We cannot avoid again urging a trial of the method of making clover hay *in cocks*, as we have heretofore recommended, notwithstanding the rebuke we have had upon this head from our esteemed friend and correspondent, Mr. Perkins. We have followed the practice twelve or fifteen years, and hence speak from experience, and with confidence, of its manifest advantages over the common method of spreading from the swath. Put it into small cocks, with a fork, from the swath, as soon as it is freed from external moisture, or well wilted, and then leave it to cure. An hour or two exposure to the sun, previous to its being carted from the field, is all the further care it will require. This mode saves labor, prevents injury from rain, and secures the hay in the best possible condition.

INDIAN CORN.

There is no crop which habit has rendered more indispensable to the wants of our families and our farms than this. The late John Taylor, of Virginia, termed it our "meat, meal and manure." Holding this high rank in our farm economy, it is a subject of moment to adopt the best mode of culture. As many districts are shy in producing wheat, and as this crop is seriously threatened by the new (to us) wheat insect, it becomes more a matter of solicitude to render our corn crops productive. But as this grain demands more labor in its culture than other grain crops, so it is more important, on the score of profit, that it should be well managed: for if thirty bushels an acre, be considered only a remuneration for the labor bestowed on the crop—all that the pro-

duct falls short of this must be a loss—and all that it exceeds, a net gain to the cultivator. The first consideration in regard to the corn crop, is to give it a dry mellow soil; the second, that this soil be rich, fat or fertile; and the third, that the seed be timely put in and the crop well taken care of.—Neither wet grounds, nor stiff clays, nor poor grounds, will repay, by their product, the labor required on a crop of corn. He who has no other lands but these, should not attempt to raise it as a field crop. He had better bestow his labor upon other objects, and buy his corn. We think the best preparation for corn is a clover lay, well covered with long manure from the barn-yard, well ploughed--and well harrowed. It is better to give sixty loads of dung to three acres than to ten, upon the ordinary lands of our neighborhood. The difference in product will not make up for the difference in labor. Corn can hardly be dunged too high. What we have to recommend, that is not common in the culture of this crop, is,—that double the usual quantity of seed be applied,—the number of plants to be reduced at the weeding—in order to ensure three or four stalks in each hill;—that the roots be not broken, nor the manure thrown to the surface, by the plough, but that the harrow and cultivator be substituted for it, which will sufficiently mellow the surface and destroy weeds; and that the hills be but slightly earthed. By ploughing and hilling we conceive the manure is wasted, the roots broken and bruised, and limited in their range for food, the crop more exposed to injury from drought, and the labor increased.

If the fodder which the stalks and shucks afford is an object to the farmer, as they certainly will be when their advantages are appreciated, the securing these in good condition is a matter of importance. To effect this, as well as to secure the crop from the effects of early autumnal frosts, we recommend the practice we have long and satisfactorily followed, of cutting the crop at the ground as soon as the corn is glazed, or the surface of the kernels has become hard, and of immediately setting it up in stocks to ripen and cure. This we have always been enabled to do early in September, and once in the last week in August. The quality of the grain is not impaired, nor the quantity, in our opinion, diminished, by this mode of management, while the fodder is greatly increased, and its quality much improved. We refer the reader, for a corroboration of the correctness of our views upon this subject, to the article in to-day's Cultivator, signed Agricola, which we copy from the Baltimore Farmer and Gardener.

PRUNING FRUITT TREES.

We deprecate the old practice of trimming fruit trees in autumn, winter or spring. Vegetation being dormant, the tree can make no speedy effort to cover the wounds inflicted by the knife and saw. These wounds, exposed to searching winds, and a scorching sun, become diseases, and often bring on premature decay. Besides, an attentive observer must have noticed, that whenever pruning is performed in the spring, three shoots are often thrown out where one has been cut away, so that the very evil which it is intended to remedy, a redundancy of useless spray, is increased rather than diminished. If pruning is performed in summer, after the first growth, say in the first fifteen days in July, or the last seven in June, the tree then abounds in elaborated sap, the wounds are speedily healed, and amply protected, by the foliage, from the malign influence of the sun and winds. We have remarked in successive years, and the fact is noticed by others, that when a tree is pruned in summer, there are very seldom any sprouts seen to shoot from the parts where the knife and saw have been employed. If the reader will try the experiment of summer pruning upon a few trees, we have little doubt he will agree with us, that it has a decided preference over that performed in any other season. The grand error of our farmers consists in not pruning at all, or only at long intervals, when it becomes necessary to take out large limbs, and in doing this, the axe is too often employed, which mangles the trees so badly that they seldom fully recover from it. Pruning should be performed annually, while the limbs to be taken off, and the spray, are small. The operation is then trifling and safe, and the wounds speedily heal. We want no better evidence of a slovenly farmer, than to see his fruit trees so enveloped with succors as to render it doubtful which is the parent—a case which, bating a little fiction, is often witnessed by the traveller.

ROOT CULTURE,

Presents many advantages to the stock farmer. Roots are less exhausting to the soil than grain; they are admirably fitted to form a part of a course of crops; are very beneficial in pulverizing the soil; afford abundance of food for farm stock; may be substituted for grain; and serve to augment and improve the valuable product of the cattle yard. An acre of ground, under good culture, will produce, on a fair average, twenty tons of Swedish turnips, mangel wurtzel, carrots, parsnips or potatoes. Supposing a lean animal to consume one bushel a day, and a fattening animal two bushels, the produce of an acre will then subsist three lean bullocks 110 days, nearly the period of our winter, and three fatting ones 55 days.—We merely assume these as reasonable data, and ask, if the result does not prove the profitableness of their culture. But we are not permitted to doubt upon this subject, if we credit the testimony of those who have tried them, and whose continuance in the culture is the best proof of their value. Roots enter largely into the system of Flemish husbandry, which has been extolled as inferior to none other, and in many parts of Great Britian, turnips are considered the basis of profitable farming. In our country, root culture is winning its way to notice and to favor. Few who have managed it judiciously have been willing to relinquish it; while others are annually commencing it. The great obstacles to the more rapid extension of the culture among us, is the want of experience, the want of proper implements, as drill barrows, cultivators, &c., and the labor of securing the crop in winter. The apparent magnitude of these obstacles is daily diminishing, and we shall ere long discover, that root crops may be cultivated, and secured for winter use, as easily as other farm crops. We have had very little experience in cultivating carrots, parsnips or mangel wurtzel as field crops; but the Swedish turnip has been a favorite crop for some years; and we can truly say, it has been one of the most sure and profitable that we have taken from our grounds.

CARROTS AS A FIELD CROP.

The Massachusetts Society for promoting Agriculture by its "committee on vegetable and grain crops," recently awarded to Mr. John Moorehead of Marshfield in the County of Plymouth, the premium offered on Carrots, for his fine crop of 645 bushels of 56 lbs. each, on one acre and three rods, being about 683 bushels on an acre, $20.

Mr. Moorehead gives the following particulars concerning his carrot culture and crop, which we copy from the New England Farmer:

1. The land was planted in corn in 1833, and was in good heart. 2. It has been used as a pasture for more than thirty years; one half of it was planted without any manure, the other half with a mixture of kelp and common barn yard manure; the product was forty bushels or over; it was *hoed* in the usual way three times, besides twice ploughing. 3. In the latter part of the winter of 1833, and the first part of the winter of 1834, there was carted seventy three loads of kelp from the sea shore, besides two loads of barn yard manure, making in the whole seventy-five loads for one horse; the loads were about one half as much as a three cattle team would draw; the distance about one mile; the kelp was laid in small heaps, three to each load, upon a piece of land containing one acre and three rods. 4. The quantity of seed used was a small fraction over three pounds. 5. In the beginning of April the old corn roots were dug up, the kelp spread, and the land ploughed; it was then hoed across the furrows, as it was not loose enough to receive the seed. Besides, there were some small stones and brier roots taken out. It was harrowed three times with a one horse harrow, then raked, which completed the preparation for sowing. The seed was sown from the 14th to 19th of April. First time of hoeing from 29th of May to 3d of June; second time from the 20th to 28th of June; third time from the 19th to the 29th of July.

The seed was sowed in rows thirteen inches apart, and after sowing was rolled with a light roller by hand.

Amount of labor:—

Drawing kelp from the beach, -	$25 00
Drawing out the corn roots and taking them off, - - - - - -	1 00
Ploughing the land - - -	2 00
Hoeing across the furrows and taking out small stones, - - - -	5 00
Harrowing and raking it over, -	2 00
Sowing the seed and rolling, -	6 00
First hoeing, - - - -	6 00
Second hoeing, weeding and throwing out,	10 00
Third hoeing and weeding, - -	8 00
Harvesting and measuring the whole crop,	25 00
Carrot seed, - - - -	3 00
Total, - - -	$93 00

Began to harvest Carrots Oct. 26, and finished Nov. 8. The Carrots were first dug up and laid in rows to dry, then carted to a piece of green sward, separated from the tops and dirt, carefully measured and some of them weighed. The whole amount of Carrots was six hundred and forty-five bushels, containing fifty-six lbs. and upwards.

THE BREEDER & MANAGER.

[From the Tennessee Farmer.]

We invite the attention of our readers, to the article in this number, from that valuable work the Farmers' Register, on the raising and fattening of Hogs. It will be found to contain some humorous sarcasms, on the absurd mode adopted in Virginia, and with little alteration, too generally practised in this country, of rearing this valuable animal, a mode which tho' adopted for its supposed economy, is in truth, perhaps the most wasteful, the most extravagant, and the most unprofitable ever yet devised. The actual loss annually sustained in Tennessee, from the manner in which hogs are generally reared and fattened, is immense, and would, could it be ascertained with precision, astonish those by whom it is resorted to, under the erroneous impression, that it is recommended by its economy.—We should hazard little by asserting, that by a more humane and judicious mode of rearing hogs, double the quantity of pork could be annually raised from the food now expended in raising the half, and that pork too, of far superior quality. To raise hogs with profit, except in a few situations, possessing peculiar advantages, situations now rarely to be met with, two rules must be observed. First—to feed the sows in such a manner as to enable them to keep the pigs fat until weaned. Secondly, never to suffer them to become poor after they are weaned. By observing these rules, especially with the aid of clover, it will be easy to make a hog at from twelve to eighteen months weigh double, if not thrice as much, as many now do at two and three years old, and with no greater quantity of grain than is now often expended in rearing and fattening the latter. The suggestions of the writer of the article alluded to, are well worthy the attention of all who wish to convert their corn into pork with profit. The absurd selfish notion, that whatever a hog picks up in the woods, or in his neighbor's fields, is so much clear gain to his owner, ought long since to have been banished, by the notorious fact, that many hogs thus raised, after being fatted, will not at a reasonable price, sell for as much as the corn cost, consumed by them. Whereas, one judiciously raised, will sell for double the price of the grain expended in rearing and fatting him. If any one doubts the truth of this assertion we only ask him to make the experiment on two litters of pigs, keeping an accurate account of the food consumed, and of the price of the pork yielded by each, and his doubts will be speedily removed.

To keep stock of any description, in a state of almost constant starvation, is cruel and immoral, and it will, on a fair experiment, be found, that in this instance, as well as in every other, Providence has so connected the duty and interest of man, that he cannot violate the former but at the expense of the latter. Were this great truth well understood and well considered, it would produce many valuable improvements in Agriculture, it would save the innocent and helpless domestic animals from a dreadful mass of suffering, and it would save the earth, from the impoverishment, by which posterity are subjected to oppressive labors and hardships for its renovation, which an enlightened regard to their own true interests, on the part of their ancestors, would have rendered wholly unnecessary. As the rearing of hogs ought probably, in the present state of East Tennessee, to form a prominent item, of her agricultural pursuits, we propose from time to time, presenting to our readers the most valuable articles on the subject, which may be within our reach, and we earnestly request those who may have made any valuable experiments, to furnish us with a detailed account of them, and of their results. Our own experience authorises us confidently to assure our readers, that regular salting is no less beneficial to hogs than to other stock, and that to spread the salt on ashes in the salt trough, is a mode well calculated to preserve the health of the animals.

[From the Farmers' Register.]

ANOTHER WAY OF FATTENING HOGS.

It has been often said of the Dutch farmers in the State of New York and of the German farmers of Pennsylvania, that in many very important branches of their business, they indolently follow, from generation to generation, those imperfect customs and ways of their forefathers, which grew out of that rude state of things, belonging to the settlement of an interminable wilderness, and which were adopted from the necessity of the case. I think the extraordinary manner in which hogs are permitted to run at large in Virginia, is as strong an instance of veneration for ancient customs, as can be produced in the more Northerly States. Certainly as far as that laudable feeling has any thing to do with the matter, the ancient dominion maintains its reputation well, for the observation is not united to particular localities, but appears to apply to every part of the State, east of the mountains.

The custom of letting sows pig in the woods, and then suffering them to get a precarious living there for the next twenty months, grew out of the necessity of the thing, when the first settlements were made. The planters in those times had constantly to provide against dangers which even menaced their lives. It would be unreasonble to suppose that the sort of management and economy of means which are so successfully practised in our days, could be carried by such men into the details of their farming affairs.—They were too much engrosed with *keeping the country* for their posterity. Bacon, however, they could not well do without, and it was the least disadvantageous way to procure it, to let the hogs run at large, and feed upon the mast, which sometimes, but not every year, is very plentiful. Yet even this advantage was purchased very dearly. If we look back to the various legislative enactments on the subject of these animals, we can form to ourselves some idea—far short of the truth I imagine—of the anxiety, the trouble, the loss of time and temper, the quarrels, the occasional loss of life, which produced these enactments. In the Statutes at Large, it appears, in 1632, only twenty-six years after the first settlement of Virginia, no man was allowed to kill a hog except on his own plantation. This enactment no doubt was suggested by the misunderstanding of the planters. In 1642, any man killing hogs on his own land, was obliged to call in two witnesses to ascertain that the hogs were unmarked. Any man convicted of killing a tame hog, not his own, was to "suffer as a felon."—This punishment was afterwards commuted to a fine to be paid to the owner of the hog of one thousand pounds of tobacco, and another thousand pounds to the informer. In case of inability to pay, the offender was to *serve* the owner of the hog one year and the informer another year. Any person bringing home a hog or hogs without ears, was to be proceeded against *as a hog stealer*.* In 1674, the Indians were ordered to put such a mark on their hogs, as the county courts should direct; and that Indian proof was in future to be good against Indians, to convict them on the act against hog stealing. In 1679, these laws not being sufficient, it was enacted that any one taken a third time stealing hogs, should be tried by the laws of England, as in case of felony.

We are now almost in the middle of the nineteenth century; every man who has got a home can live under his own vine and fig-tree secure in his possessions, fearing no violence, and not under the necessity of intending any to others; still the sows pig in the woods, still the unhappy shoats that have survived one winter, are running, three quarters legged, up and down the woods hunting and screaming for the mast that did not happen to grow this year; some with their ears notched on one side, some on both, some a quarter clipped off, some half, some without ears as if they had stood in the pillory. Then comes November, that hog trotting month, to the small farmer.

"Have you seen my old white sow?"

"I can't say I have."

"Well, they telled me she was seen at your place about harvest time."

"Why there was a strange sow rooting in my sweet potatoes in August; what marks had she?"

"Her left ear rotted off last winter, and she had a considerable gash in the right one."

"Ah, I guess that was not your sow then, for this had lost both her ears, and had seven shoats, mighty bad varmint all of them for squeezing through the rails."

"Well then that *was* my sow, for when she lost her left ear, she looked so much like Jim Carpenter's, that I cut 'tother ear off too in March last, when she had six good shoats and a runt with her."

"Well I don't know where she is, I know nothing about your hogs. Here Paul," (calling his black man,) "have you seen Mr. Smith's hogs?"

"No masser, I nebber see him since we turn him out of 'tatoe patch.' "

Now Paul being a leading man in the church Mr. Smith had nothing left for it but to believe

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*In 1666, it was enacted that if any Indian crossed the bounds of Henrico county, after notice given of the establishing of the bounds, "it shall be lawful for any Englishman to kill such Indian or Indians so transgressing." Thus an Indian looking for his hogs over those bounds, might be killed according to law. This law was not passed in relation to hogs, but private murders committed on the English.

him; and as soon as his master went to the house, having a high opinion of Paul's stock of veracity, he tho't he would purchase some of him, and taking him to the edge of the woods, he said, "Paul, I'll believe what you say, and here's a quarter if you will tell me the truth. Where's the hogs now? I'll never say you told me."

"Well den massa, de fac is, de sow and de runt is in the old field by de branch at Mr. Jinkins'. I seed 'em day before yesterday. But where de oder shotes is, dat is, umpossummel to tell."

"Will you help me to drive 'em home?"

"It an't not possummel to drive neider of 'em dat is de fac masser—for de runt hav lost bote de fore feet, and old sow have he leg broke."

"Well now who the devil has dont this?"

"I think he is possummel masser, somebody fire buck shot at 'em. Old sow masser and all de shotes was so mischievous, and thin, and so hungry e e is no fence to stand 'em. By golly, I neber see de like, he turn him on his side, and squeeze him through de fence jis as a par tongs."

"You're an infernal set of devils as ever lived. I was told that you and your master had shot three of the shoats, and had sold their carcasses to a waggoner that was going along.—But I'll serve you all properly for this."

This is no sketch from fancy, but a relation of what occurred between neighbors this fall, and part of the dialogue took place in presence of the writer of this paper.

Then the planter with his large family of negroes to sustain. He, to be sure, gives his shoat something to eat the first winter; but it is wastefully done. Corn is thrown to them in the ear, and most of it is swallowed uncracked, and is never digested. Many of them, however, are kept alive, and though thin enough, they count for hogs. It would be bad policy to turn them into the woods in good order. The negroes are very apt to take a severe tithe of them. But what trouble, what loss has the planter to encounter, before his pork is killed, and then what sort of hogs does he put up for bacon?—Miserable things, weighing 120 to 140 pounds. How long does his raised bacon last. How many hundred of dollars have too many of the large planters to pay for purchased bacon to keep his gangs with? Is it not possible for him to raise his own bacon, and save all this money? Is it not a reproach that all this should be so in a country where the soil and the climate are so favorable to the production of Indian corn, that it may be considered the staple commodity, from which another great staple might be made for exportation—pork.

Although what is now about to be stated, may be considered by some readers as a gasconade, the writer will notwithstanding close this paper by communicating *another way of fattening hogs*, which any one can imitate, and every one can succeed in if he chooses to try the experiment. He is not going to suppose an experiment, he is going to narrate a method he has often seen practised, and often witnessed the success of. It must be remarked that the breed of hogs and cows necessary to the success of this process, is not that which offends the eye of every man accustomed to good stock and of which too much is seen in Virginia.—The hogs may be of that mixture of the Chinese and grass breed, so abundantly found in the State of New York; and the cows must not be starved, neglected animals, hardly alive when the spring opens, and of which it takes seven to give six quarts of milk. There are good cows in Virginia, and they only require to be kept up in hard weather, and well kept through the year, to keep their owners. Such cows ought to give twelve quarts of milk a day each.

No hog should run loose, the styes should be convenient, warm and easy to clean out. Only one sow in a stye large enough to contain eight or nine well grown animals. It should be contrived that the sows pig about the time the calves are taken from their mothers, or not later at any rate than the cows calve. Every sow about to pig must be well fed three times a day, with coarse meal, potatoes, garbage, &c. mixed up in the swine tub: they will then have plenty of milk for their pigs. Have your inferior and other grain, such as corn and rye, ground coarsely in sufficient quantities, and put into one or more hogsheads mixed with water, and stirred well; if it is a little sour the better. As soon as your pigs begin to grow and drink at the trough, give them a little of this mush mixed with new milk, and increase the quantity as they grow, until you give them every day as much as they seem to require. To be able to do this, you must have three or four spare cows, the whole of whose milk for the first ten weeks may be given to the pigs. When the sow finds the pigs strong and troublesome, she will fight them off; it is best then to take her off and put the sows in a stye by themselves. If you wish to fatten them and change your sows, or breed the next year from favorite sow pigs, feed them out of the hogshead. Swine fatten much faster in warm weather, and do not eat much when they are taking on fat. A shoat sow, one of those deep bodied and short legged animals, will raise, if well fed, eight pigs. Pigs thus treated, which have been pigged about the 25th of March, will at Christmas, when at nine months old, average four hundred pounds weight each; and pork of this kind will fetch the very best price to put up for mess pork, perhaps double what you have to pay for such, as it may be preferred to consume on the plantation. The writer of this paper repeats that he has seen this done for many years in succession: once he saw a lot of pigs average four hundred and ten pounds. Let the planters think of this, and some of them try the experiment fairly for one year, and publish the result. And let them not forget the real pleasure they feel at seeing business properly done, at observing fine animals daily prospering with a promise of sure reward. Let them not forget how much anxiety and trouble they have saved, how much destruction of crops and fence mending they have prevented. Neither let them forget what an advantage this system of pork feeding may prove to Virginia. Let something be done for the sake of the country: there would be some patriotism in an experiment of this kind, better than a good deal of that Roman patriotism, sometimes talked of in the newspapers; at least it is my opinion, and I am of Roman descent, as my signature will show.

MARK-US, PORK-US, BRUT-US.

THE GARDENER.

[From Cobb's Silk Manual.]

CULTUE OF THE MULBERRY TREE.

Manner of multiplying Mulberry Trees by cuttings.

The soil chosen to receive the slips of the mulberry tree should be prepared much in the same way as has been described for the seed. The cuttings of the mulberry are to be planted in the same manner as the cuttings of the vine; that is, by making furrows by a line at the distance of six feet from one to the other, and by crossing them by furrows at the same distance, in order to form squares. A two-year old branch of a mulberry tree, having wood of four or five years at one end, must be selected, and the extremity of the old wood must be interred to the depth of about ten inches. The branches chosen from the white mulberry must be taken off in the spring at the first rising of the sap. Two or three incisions must be made in the joints or knots of the old wood, because this operation will facilitate the shooting of the roots, which always put forth from the joints of the old wood. The cuttings must then be covered with a well manured and friable earth, and the end of the branch which rises from the soil must be cut off at the third bud from the surface. If rains should not frequently occur after the plantation is finished, it would be necessary to water the plants often. The multiplication of mulberry trees by means of cuttings, is said to have the important advantage of two years in advance over the establishment of a nursery by means of seed, in Europe.

By Layers.

To make layers, is to force a branch or a shoot of a tree or of a shrub to become itself a tree or a shrub, by putting a branch or a shoot into the ground without separating it from the parent tree. The spring is the most suitable season for this operation. The shoots which arise at the foot of a tree, the youngest smooth branches found about the lower part of the mulberry, any other branches that are long and supple enough to be secured in the ground, and lastly, the shoots of a young tree whose trunk is not high, and which may be laid easily, may be used. If there arise some vigorous shoots at the foot of a mulberry tree, a hole must be dug six or eight inches deep near each shoot, into which the shoot must be laid without twisting it or separating it from the tree. It is then to be secured in its place with crotchets of wood, and covered with good mould, which must be pressed over it, and the end of the shoot which rises above the ground must be cut off above the second bud. It will be further necessary to place by the side of the layer a stake to mark the place and prevent its being trodden. It must likewise be watered immediately after the operation, and as often afterwards as may be necessary to maintain about it a proper state of moisture.

The young and smooth twigs among the branches of the mulberry may be passed through a basket or vase perforated at the bottom and filled with earth well manured. The twig must be cut off four or five inches above the vase or basket,

and the mould kept in a due state of moisture by frequent waterings.

When a mulberry tree is well spread, and the boughs nearest the ground have not been lopped, some of the branches at the distance of six feet from each other may be bent down and secured in the ground, so that the ends shall not rise more than six or eight inches above the surface.

All the layers made in these diffent ways may be separated from the parent tree in the autumn of the second year. They may be cut off four inches from the parent trunk, be taken up carefully with their roots and small fibres, and placed in the nursery, or permanently established in an orchard. In the nursery they may be set at the distance of six feet from each other, and in the following year, by heading them down, four or five layers may be made from each. By these means one hundred trees may be increased in four years to eighteen hundred; for the parent trees, after the layers are separated from them, being replaced in a straight position, secured to a prop, manured, and watered, generally retrieve their strength, and make productive trees.

Transplanting for Hedges.

After standing in the nursery a suitable time, the trees may be transplanted for making hedges. I prefer transplanting in the spring. Great care should be taken to preserve the very fine roots.—If hedges for fences be wanted, the young trees may be taken from the seedlings of the last year. The white mulberry forms an excellent live fence, and when once established is probably the most permanent of any other. Cattle must not be allowed free access to the hedge while young, as they would destroy it altogether; but after it has become a good fence they may approach it with advantage. The more it is broken and lacerated by cattle, the more impenetrable it will become; as for every branch broken, a half dozen shoots will immediately start out, till the bush forms a perfect bramble. This mode is therefore recommended as accomplishing three important objects; supplying food for silk worms; keeping the trees low, that the leaves may be gathered from the ground by children, and furnishing a good and almost never ending fence. In transplanting young trees for hedges, they should not be pruned; but the second year, or at least the third, the tops should be cut off, and the side branches trained laterally with the hedge by interweaving them.

Setting out standard Trees.

It is an axiom in rural economy, that the greater the disbursement in improving the land, the greater will be the proportional income. The land where the trees are to be set, will be much better for the purpose, if ploughed, harrowed and manured. The trees may be three years old if taken from a rich soil, or four if from a poor soil; they should be from four to eight feet in height, and at least an inch in diameter. The holes should be dug at about the same distance from each other as for setting apple trees, and be made eighteen inches deep and three or four feet in diameter. The bottoms of these holes may be covered with a few inches of fresh mould. The young tree should be placed in its proper range, ascertained by a stake at each extremity of the line, and it should be held there till its roots are well covered with friable and well manured earth, free from stones, and must be well trodden down, and watered, if necessary; a small cavity round the stem to retain the rain is very proper. Two or three dressings a year with a hoe, and manuring occasionally, may be of essential advantage.

Grafting and Budding.

In grafting it is essential to adapt the bark of the scion at its extremity to the bark of the stock, and to place the scion on the northerly side, in order that it may be less exposed to be withered and dried by the sun. Budding should be performed with the same care as in other fruit trees, in order to insure success. But these and many of the modes of improving and propagating the mulberry, which have been resorted to in Europe, will be unnecessary in this country. With us, land is so cheap and labour so high, that the easy and convenient mode of propagating by seed will be chiefly resorted to, and no essential permanent advantage will result to us from grafting or budding, except in propagating the rare varieties.

Pruning.

The imperfections in the form and growth of the trees may be remedied by a judicious pruning, once in two or three years; and with regard to that, the good sense of every cultivator will direct him how to form a tree the most beautiful, as well as the most productive. June is the best season for doing this, and the young branches that are taken off will afford their leaves for the worms.*

Growth of the Mulberry Tree.

Standard trees, when once well rooted, will thrive in any soil that is not too wet; the gigantic size to which the wild native mulberry attains in the western country, and numerous examples of large and thrifty trees in the Atlantic states, furnish abundant evidence of this. The mulberry tree attains to very great age, and no other tree of equal growth and beauty resists so well the influences of the sea atmosphere. Two or three grand specimens of this beautiful tree, says Mr. Phillips, standing on the most exposed situation of the northeast coast of England, not only defy the enemy, but delight in their situation: throwing out their noble limbs in all directions, and assuming a foliage rich, full, and tufted to its topmost boughs: one of them is of the greatest magnitude, though some of its vast limbs have been torn from it; it is still in vigour, and in point of richness of effect, the oak itself is scarcely superior. They are abundantly prolific. The red, or as it is more commonly called, the purple mulberry, is considered as the only species indigenous in this country. The northern extremity of Lake Champlain is, according to Michaux, its most northern limit. It is found in all the states of the Union, south and west, and Dr. James found it as far west as the river Canadian.

Every thing is useful in the mulberry tree. Its leaves are valuable in the silk which they produce by nourishing the silk worm; its fruit is excellent for poultry, and the wood is useful for the joiner and for fuel. The mulberry tree may also serve as an ornament to our gardens and streets, very different from the Lombard poplar, which harbours a loathsome insect, or the elm, or the ash, which are barren and do not afford so thick a shade; and as this tree is always handsome and useful, the Author of nature has been pleased to add cleanliness, as on account of the acrid bitterness of its sap but few insects will harbour upon it.

The first mulberry tree that was planted in France was near Montelimart, and nearly three centuries after (in 1802) the original tree was still in existence.

In England it was first planted in the year 1548; Mr. Phillips saw at Sion House the original trees. He found their interior so decayed, that the timber crumbled on being touched; the propped branches were nevertheless so well nourished, that the fruit and foliage were not inferior to those of the youngest trees. Of the plantations formed during the reign of James I. many venerable remains are still seen in England. Mr. Phillips found a black mulberry tree in a garden adjoining Greenwich Park, which is supposed to be one of the oldest in England. "It throws out," says Mr. P., "ten large branches so near the earth, that it has the appearance of half a score of large trees rather than one, and notwithstanding many of the projecting branches have been sawed off, it completely covers a circumference of one hundred and fifty feet; and although the elder trees have fixed their abode in some parts of the trunk, and other parts are covered with ivy, it continues to give shoots as vigorous as the youngest tree, and produces the finest mulberries in England. It is a regular bearer, and the gardener assured me that he gathered more than eighty quarts per day during the season.

* For taking off the small branches of larger trees which could not be reached by hand, I saw an ingenious contrivance at Baltimore by G. B. Smith, Esq. It was nothing more than a pair of pruning shears attached by one of the handles to a ten foot pole, which is held in one hand, and operated upon by means of a cord passing through a pulley, and attached to the other handle, with the other hand; by this simple contrivance the twigs and branches were taken off with ease, and so smoothly as not to lacerate the bark or injure the appearance of the tree.

[From the Horticultural Register.]

GARDENER'S WORK FOR MARCH.

Early Peas may be sown or planted as soon as the ground is sufficiently thawed. Be sure to plant an early sort, if you wish for an early crop, and after the ground has acquired a temperature favorable to vegetation, you will do well to sow once a fortnight from this time to about the first of July. One pint of the small early kinds will sow a row of twenty yards; for the larger sorts, or main crops, the same quantity will sow a row of thirty-three yards. Drills for the small sorts one inch and an half deep; two feet and a half or three feet apart, and along the drill about three peas in the space of an inch. A loose and warm soil, with a little decomposed vegetable matter, and but little or no stable manure, are best for peas. Lettuce may be sowed as soon as practicable between vacant rows, intended for other plants, or it may be grown by itself in beds. A quarter of an ounce is seed enough for a bed four feet by

ten. As soon as the weather is mild enough you may transplant such cabbage plants as were sown in autumn, or in hot beds. Also sow seeds of every kind of cabbage, which you intend to cultivate. If you wish to produce early cabbages, you may cut sprouts from stumps, or stalks, preserved in a celler, through the winter, as soon as such sprouts have grown to a length fit for cutting. Take with each a small slice of the stalk, about two inches long; and as soon as the season will permit plant them in a garden, and with the usual care they will give you early cabbages. You may also select from your cellar the best cabbages with heads, and set them in some proper place to stand for seed. Attend to your beds of asparagus, dress the old beds, and make new ones if wanted. If the seeds are sown to transplant, you will need about a quart for a bed four and a half feet wide by six feet in length. If sown to remain, for a bed four and a half feet wide by thirty feet in length, one pint is about the proper quantity. Sow the garden cress as follows: Having chosen a fine mellow soil to receive the seed, dig the surface, rake it, and put in the seed, very thickly, in small flat, shallow drills, four, five or six inches asunder, and cover very lightly. Mustard, also, whether white or black may now or soon be sown either for seed or for salad. Sow moderately thick, either in drills from six to twelve inches asunder, or broad cast, and rake or harrow in the seed. Sow parsnips, "for a bed five feet by twenty, the plants to remain thinned to eight inches distance, half an ounce of seed is the usual proportion." Carrots may also be sown towards the end of the month, thin in drills from eight to ten inches apart.

[From the same.]

REMARKS ON RAISING NEW VARIETIES OE PINKS.

Being unaccustomed to write for the press, a very plain statement only can be expected, but it may be depended on as the result of long experience.

The effects of impregnation, or in other words of assisting nature in improving and diversifying the common pink, Dianthus caryophyllus may appear to some a work of great labor and minuteness. In the case of fruits, it requires many years before the effcts of impregnation can be ascertained; but with the pinks it does not require more than two years before a splendid collection may be obtained. It is necessary in almost all other genera to divest the flower of its own stamina at an early stage of growth, but the pink being naturally defective in stamina this is not requisite, so that a great many plants my be impregnated in a very short time—all that is necessary is merely to put the antheræ, which contain the pollen of the single flower, in contact with the pistil of the multiplicate or nearly double flower, shedding some of this pollen on it. When the seedlings have come into bloom look carefully over them, and of the single only preserve those with good color and leaf, thowing the others away to afford more room for those selected for impregnation.

In all my experiments I have found that the best and surest methed of procuring seed that will vegetate is to use this artificial impregnation, and by no means to trust to nature, although many of the multiplicate flowers may be found possessed of stamina and antheræ.

My desire to see this beautiful flower more generally cultivated by the American florist has induced me to offer these few observations, in hopes that the ensuing season will not be suffered to pass without many of the lovers of flowers trying the experiment. ROBERT MURRAY,

Gardener to Messrs. Winship, Brighton, Mass.

MISCELLANEOUS.

POWER OF MACHINERY IN GREAT BRITIAN.

Mr. W. Pares, at a public meeting, lately held at Birmingham, stated in proof of the increase of the powers of production, by the improvement of machinery, that in 1792, the machinery in existence was equal to the labor of ten millions of laborers; in 1827, to 200 millions; and in 1833, to 400 millions. In the cotton trade, spindles that used to revolve 50 times in a minute, now revolve in some cases 800 times in a minute. In one mill at Manchester, there are 136,000 spindles at work, spinning one million two hundred thousand miles of cotton thread per week. Mr. Owen, of New-Lanark, with 2,500 people, daily produces as much cotton yarn as will go round the earth twice and a half. The total machinery in the kingdom is calculated now to be equal to the work of 400 millions, and might be increased to an incalculable extent under proper arrangement. —*Birmingham Journal.*

BLOWING OUT A CANDLE—Mr. Minor: I asked a lady to furnish me with a topic for a paragraph for your Farmer. She gave me the blowing out of a candle. As simple as it is, said she, not one in a hundred knows how to extinguish a candle as it should be. Some will exhaust themselves in blowing, and then leave the unextinguished wick to fill the room with smoke; others will break the candle, or drop the grease on a clean floor or good carpet, in attempting to pull the candle out of the stick to invert it. The best way, when you have not an extinguisher, is to take a little tallow on the head of a pin, let it melt off on the top of the wick, and immediately blow out the blaze. A very slight effort is required—no smoke follws—and the wick is in a proper condition to be again lighted. L. T.

She Goats.—I believe the best method of rearing children, when their mother cannot nurse them, is by allowing them to suck a domestic animal. I know a fine healthy young lady, now about seventeen years of age, who was thus reared. A goat is the best animal for this purpose, being easily domesticated, very docile, and disposed to an attachment for its fostered child: the animal lies down, and the child soon knows it well, and, when able, makes great efforts to creep away and suck. Abroad the goat is much used for this purpose; the inhabitants of some villages take in children to nurse; the goats when called, trot away to the house, and each one goes to its child who sucks with eagerness, and the children thrive amazingly.—*Gooch's Lectures.*

Silk Machine.—We learn that an enterprising mechanic of this town has invented a machine for reeling, spinning and twisting silk, applicable to domestic purposes, or may be worked by horse or water power. By this machine the silk is separated from the cocoon and made into threads of any size wanted, spun, doubled and twisted, placed on quills, reeled or wound into balls, by one and the same operation, ready made into twist or sewing silk, or for coloring and weaving. The space occupied by the machine is only about 5 feet from the cocoon to the completion into silk finished.—We have the strongest assurances of its success, furnishing an apparatus which will give this country an advantage over all others in the production of the raw material.—*Northampton Courier.*

Cure for burns and chilblains.—A. Brunson, of Meadville, Pa. says, from fifteen years experience, he finds that an indian meal poultice, covered over with young hyson tea softened with hot water, and laid over burns and frozen flesh as hot as it can be borne, will relieve the pain in five minutes; that if blisters have not arisen before, they will not after it is put on, and that one poultice is generally sufficient to effect a cure.

Curious effect of Fogs.—The Household Year Book, an English publication, says:—"During a fog of twenty-four hours continuance, threshes, wheat-ears, ortolans, and red-breasts, are reported to have become so fat that they are unable to fly from the sportsman."

Indian Tobacco.—We have been shown some specimens of smoked Saccomic and Kinnekanic so generally used by the Indians of the Rocky Mountains in substitute for tobacco. The flavor is very delightful, superior to that of much of the tobacco that is used by those who boast of a higher grade of civilization.—*Philadelphia Inquirer.*

Great Oxen.—Col. Timo. Cowles of Farmington, Ct. sold recently in New York a yoke of oxen that weighed on the hoof 5490 lbs., at about $10 per cwt.—*Westfield Journal.*

The academic and manual labor Institute at Dayton, Ohio, has been in operation one year, and with happy results. A considerable proportion of the students who have laboured, have earned from $36 to 55.

A Parent's benediction for a Child.

The morn that ushered thee to *life*, my *child*,
Saw thee in tears, while all around thee smil'd,
May each succeeding day, through peril and strife,
Evince to all, in thee, a well spent life;
Till summoned *Hence*, to thine Eternal *sleep*,
Then may'st thou *smile*, while all around thee *weep.*

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BALTIMORE PRODUCE MARKET.

☞ *These Prices are carefully corrected every* MONDAY.

	PER.	FROM	TO
BEANS, white field,	bushel.	2 00	2 50
CATTLE, on the hoof,	100lbs.	5 50	6 00
Slaughtered,	"	3 00	4 00
CORN, yellow,	bushel.	64	——
White,	"	63	——
COTTON, Virginia,	pound.	16	17½
North Carolina,	"	——	——
Upland,	"	17¼	18½
FEATHERS,	pound.	35	37
FLAXSEED,	bushel.	1 50	——
FLOUR—Best white wheat family,	barrel.	6 00	6 50
Do. do. baker's	"	5 50	6 00
Do. do. Superfine,	"	5 00	——
Super Howard street,	"	4 87	4 94
" " wagon price,	"	4 75	4 81
City Mills, extra,	"	5 18	——
Do.	"	5 00	——
Susquehanna,	"	——	——
Rye,	"	——	——
GRASS SEEDS, red Clover,	bushel.	5 00	5 50
Timothy (herds of the north)	"	2 50	3 00
Orchard,	"	3 00	——
Tall meadow Oat,	"	2 00	2 50
Herds, or red top,	"	1 25	——
HAY, in bulk,	ton.	——	——
HEMP, country, dew rotted,	pound.	6	7
" water rotted,	"	7	8
HOGS, on the hoof,	100lb.	6 00	6 50
Slaughtered,	"	——	——
HOPS—first sort,	pound.	15	——
second,	"	13	——
refuse,	"	11	——
LIME,	bushel.	28	30
MUSTARD SEED, Domestic,	"	5 00	6 00
OATS,	"	30	33
PEAS, red eye,	bushel.	——	——
Black eye,	"	87	1 00
Lady,	"	100	——
PLASTER PARIS, in the stone,	ton.	3 00	——
Ground,	barrel.	1 37	——
PALMA CHRISTA BEAN,	bushel.	1 50	1 56
RAGS,	pound.	3	4
RYE,	bushel.	65	——
TOBACCO, crop, common,	100 lbs	4 25	5 00
" brown and red,	"	5 00	7 00
" fine red,	"	7 00	9 00
" wrappery, suitable for segars,	"	6 00	12 00
" yellow and red,	"	8 00	12 00
" yellow,	"	9 00	12 00
" fine yellow,	"	12 00	16 00
Seconds, as in quality,	"	4 00	5 00
" ground leaf,	"	5 00	9 00
Virginia,	"	5 00	10 00
Rappahannock,	"	——	——
Kentucky,	"	6 00	9 00
WHEAT, white,	bushel.	1 05	1 15
Red,	"	1 02	1 05
WHISKEY, 1st pf. in bbls.	gallon.	31	32
" in hhds.	"	30	31
" wagon price,	"	27½	—
WAGON FREIGHTS, to Pittsburgh,	100 lbs	2 00	——
To Wheeling,	"	2 25	——
		washed.	*unwash*
WOOL, Prime & Saxon Fleeces,	pound.	52 *to* 62	26 *to* 28
Full Merino,	"	46 52	24 26
Three fourths Merino,	"	39 46	23 24
One half do	"	35 39	23 24
Common & one fourth Meri.	"	32 34	22 24
Pulled,	"	33 35	23 26

BENE SEED.

JUST RECEIVED at this Establishment, and for sale, by the pound or in 12½ cent papers, a small quantity of the seed of this most valuable plant. It is very efficacious in the Bowel Complaints of children, and not difficult to be administered. The seed should be planted in April, in hills like beans, and the leaves will be in perfection in June. Two or three leaves being put into a tumbler of spring water, for 10 or 15 minutes, convert it into a mucilage, which being tasteless, children readily drink.

BALTIMORE PROVISION MARKET.

	PER.	FROM.	TO.
APPLES,	barrel.	$3 00	$5 00
BACON, hams, new,	pound.	11	——
Shoulders,	"	8	9
Middlings,	"	——	——
BUTTER, printed, in lbs. & half lbs.	"	25	37
Roll,	"	15	25
CIDER,	barrel.	——	——
CALVES, three to six weeks old	each.	3 00	6 00
COWS, new milch,	"	17 00	30 00
Dry,	"	6 00	10 00
CORN MEAL, for family use,	100lbs.	1 50	——
CHOP RYE,	"	1 50	——
EGGS,	dozen.	19	20
FISH, Shad, salted,	barrel.	5 75	6 00
Herrings, salted, No. 1,	"	4 75	——
Mackerel, No. 1, 2 & 3,	"	5 12	7 00
Cod, salted,	cwt.	2 50	3 00
LAMBS, alive,	each.	1 25	2 00
Slaughtered,	quart'r	31	50
LARD,	pound.	8	9
ONIONS,	bushel.	62	75
POULTRY, Fowls,	dozen.	1 50	2 25
Ducks,	"	——	2 50
POTATOES, Irish,	bushel.	40	62
Sweet,	"	——	——
TURNIPS,	"	37	50
VEAL, fore quarters,	pound.	3½	4
Hind do.	"	6¼	——

ADVERTISEMENTS

WANTED,

A GOOD JACK & JENNY, or either, for which a fair price will be paid. Address, with *minute description* as to age, color, height, size and general appearance, character as a breeder, and *price*,

I. I. HITCHCOCK,
mh 17 Amer. Far. Estab.

AGRICULTURAL IMPLEMENTS, GRASS SEEDS, &c.

SINCLAIR & MOORE offer for sale at the Maryland Agricultural Repository, Light street, near Pratt street wharf, a general assortment of PLOUGHS of the most approved kinds, adapted to the different kinds of lands and various purposes of the farmer.

Among them are the self-sharpening Plough, which has the advantage of a moveable steel point from 15 to 24 inches long, which can be reversed, as a bevel is formed by wearing, and advanced as it becomes shorter, so as to bring into actual wear from 12 to 18 inches of solid wrought bar—of assorted sizes, from the small seed plough to large three horse.

Wood's patent Plough, of assorted sizes, with cast shares
Sinclair & Moore's improved do do do do
McCormick's improved do do wrought shares
Barshear, from 1 horse to heavy 3 horse, do do
Cary Plough, having the shape of the old well known Cary, but has a cast mould board and wrought share —2 sizes
Buffalo Plough, a well formed mould board for stiff lands, with cast shares
Double and single shovel Ploughs. ALSO,
Cultivators, with wrought and cast tires
Do do made to expand
Harrows of different sizes and forms
Wheat Fans, from 15 to $35
Corn Shellers of the best patterns
Cylindrical Straw Cutters, 20 inch box, adapted to horse or water power, capable of cutting 75 to 100 bushels per hour, price $75
14 inch box hand power, 45
11 inch do do do 27

And a general assortment of small articles—such as Hay and Manure Forks: Spades; Shovels; Mattocks; Picks; Hoes; Trace Chains; Hames; Straw Knives.—Also, Thompson's superior cast steel Axes, and other Tools, wove Wire for fans, screens, cellar windows, &c.

FIELD SEEDS—Clover, timothy, herds, orchard grass, tall meadow, oat grass seed, and millet seed at lowest market prices—150 bushels prime seed oats.

March 10.

POINTER.

A FIRST rate Pointer Slut, of pure blood, 6 months old, for sale at this establishment. mh 17

FRESH GARDEN SEED.

THE Subscriber has just received by the ship Canada a splendid assortment of English and Dutch Garden and Field Seeds. The respectability of the gentleman by whom these seeds were raised warrants me in recommending them with perfect confidence. But to be certain of the quality and to prevent disappointment to purchasers, proof samples of each sort are taken and will be fully tested in hotbeds prepared for the purpose.

The most prominent received are—

600 lbs. Cabbage Seed, principally of Early Scotch York, Large York, Bullock's Heart, Early George, Sugar Loaf, Drum Head and Flat Dutch. The above named Early York is the dwarf or short stalk variety raised by one of the first Gardeners near Edinburgh.

500 lbs. Mason's short top scarlet, red, and white Turnip, long white and salmon Radish Seed.

50 lbs. Salsafy or Vegetable Oyster.

8 bushels broad Windsor, long pod, and other English Beans.

10 lbs. Early and Late Cauliflower Seed, raised from the large Dutch Cauliflower. The quality of this seed may be estimated by reference to the Cauliflowers, whose merits received the premium from the Horticultural Society last year.

10 lbs. Brocoli Seed, finest English sorts.

100 bushels Early and Marrowfat Peas, among which are Bishop's early Dwarf, Spanish Dwarf Fan and Knight's Dwarf, Honey, all fine new sorts, very prolific and growing, only 12 inches high.

375 lbs. Early Dutch Turnips, white Tankard, Yellow Bullock, White Globe and Dale's new Hybred Turnip Seed.

15 lbs. Borecole or Kale Seed of various sorts.

FIELD SEEDS.

30 bushels St. Foin or Espersett and Field Burnett; Spring Vitches or Tares; 100 lbs. Mangold Wurzell; 10 bushels early Potatoes; 5 best English sorts; 10 bushels English Lawn Grass; 200 lbs. Mustard Seed; 15 bushels Perennial Ray Grass; 300 lbs. Rape or Cole Seed; 20 bushels English Oats; 3 best sorts; 300 lbs. white Dutch Clover; 360 lbs. Lucerne; also a small parcel of Yellow and Scarlet Trefoil, &c.

IN STORE.

Parsnip Seed, Carrot, Lettuce, Beet, Cress, Cucumber, Cantaloupe, Onion, Squash, Corn Salad, Artichoke, Swiss Chard, Celery, &c. Nearly all the last named Seeds were raised by R. S. Senr. at the Clairmont Nursery, and are of the finest quality.

Orders for Fruit Trees, Shrubs and Plants received. For particulars, see catalogues; to be had gratis.

ROBERT SINCLAIR, Jr.
At Sinclair & Moore's Maryland Agricultural
March 3. Repository, Light near Pratt street.

SUPERIOR CATTLE FOR SALE,

OF the Devon, and Devon & Short Horn blood, at Brookland Wood Farm, the residence of Richard Caton, ten miles from Baltimore, on the Susquehanna Rail Road, and on the Falls Turnpike Road, consisting of

Devon Bulls, Heifers and Calves, of all ages of each denomination, from 8 months to 4 years—price, forty to one hundred dollars each, according to age and quality.

Devon and Durham Bulls, the offspring of Devon Cows, by the Short Horn Durham Bull Tecumseh. It is supposed by those persons in England who have dairies of this species, that they will be found superior to all others, uniting the beauty of form, hardiness of constitution, propensity to fatten, and richness of milk appertaining to the Devon blood, and product of milk of the Durham—price, forty to one hundred dollars. Apply to

Feb. 3, 1835. THOMAS BEVAN, Manager.

GRAPE VINES.

HERBEMONT'S Madeira, one, two, and three years old, from 25 cents to 75 each.

Isabella, two and three years old, at 25 to 50 cts each.

Catawba, one year old, 25 cts. each.

White Scuppernong, two years old, at 37½ cents each.

Sultana, one year old, at 50 cts. each.

Woodson, two years old, at 37½ cents each.

Red Bland, one year old, at 25 cts. each.

Are for sale at this establishment, and will be well packed to go any distance. no. 25

THE FARMER & GARDENER

AND LIVE-STOCK BREEDER & MANAGER.

CONDUCTED BY I. IRVINE HITCHCOCK, AND ISSUED EVERY TUESDAY FROM THE AMERICAN FARMER ESTABLISHMENT, AT $5 PER ANNUM, IN ADVANCE

No. 47. **BALTIMORE, MARCH 24, 1835.** **Vol. I**

☞This publication is the *successor* of the late

AMERICAN FARMER,

(which is discontinued,) and is published at the same office, at five dollars per year, payable in advance.

☞When this is done, 50 cents worth of any kind of seeds on hand will be delivered or sent to the order of the subscriber with his receipt.

American Farmer Establishment.

BALTIMORE: TUESDAY, MARCH 24, 1835.

FINE MUTTON.—Being in the Philadelphia Market on Saturday morning last, our attention was attracted to a lot of very superior mutton, on the stall of one of the victuallers of that city. On inquiry we found that it was from the farm of our old friend Barney, who has some how the nack of raising sheep in greater perfection than any other man we know. He had just sold a small lot of wethers two years old at $15 a head to this butcher, who lives by the profits on the meat he sells. Will not our farmers learn from such facts, what may be done by skill and attention? Barney has adopted Patch's motto—"that some things can be done as well as others."

We speak of *distance* by *hours*. The Hollanders calculate it by *pipes*! A fixed time, we think is the better mode!—and, in the present prospective state of improvement, the computation of distances will, less and less, be made by *miles*. Indeed, distance is—*the ability to perform it*. It is only rightfully measurable as *price* and *value* are. We have expended fifteen or sixteen hours on the journey from Baltimore to Washington—and three days' hard work in passing from the former to Philadelphia. We well remember when the centre counties of *Pennsylvania* were in the "back woods," further off, *in fact*, than the extreme western point of *Ohio* now is. After a while we shall begin to use *minutes*—i. e. to say, such a place is so many minutes from another! The average rate of travel, perhaps, for twenty years to come, (but we only say, *perhaps!*) will not exceed twenty-five or thirty miles to the hour, whether by steam-boats or steam-waggons—rail-roads as to the latter being regarded.—*Niles' Register.*

Nature of earths with reference to the growth of plants.—The report M. M. Thenard and Sylvester, on a memoir upon this interesting subject by M. J. St. Hilaire, is to the following purport. The author remarks that most persons who have analyzed arable earths, have taken exclusively such as have been cultivated, the original constitution of which has been more or less altered. He believes the various kinds of earths in their first state, have peculiar properties of nourishment to particular plants; and that the exact knowledge of these peculiarities would enable cultivators to put those seeds in the ground, which are most suited to it. From various analysis, he draws the following inferences:—1st, that all earths are composed of silica, aluminia, lime, magnesia, &c. different proportions, together with a vegito animal matter, which is more abundant as the earth is more fitted for the nourishment of plants. 2dly, that plants placed in earths, of which the constituent parts have analogy with the particular nature of the plants, do not exhaust the soil. 3dly, that a series of observations of the different species, genera and families, which grow natural, and in great numbers, perpetuating themselves on certain soils, with the analysis of these soils, would be of great utility in agriculture.—*Rev. Ency.*

[From the Genesse Farmer.]

FOOD OF PLANTS.

Drs. Priestly, Ingenhouse, and Mr. Senebier, have proved that it is the nitrogenous gas which more particularly serves them for aliment.—*Chaptal*, 422.

As the basis of nitrogenous gas is unknown to us, it is difficult to conceive what may be its effect upon the vegetable economy, and we cannot follow it after its introduction into the vegetable. We do not find it again until the decomposition of the vegetable itself, when it reappears in its gaseous form.—*Ibid.* 423.

MR. TUCKER.—Although Mr. Chaptal quotes very high authority, and is himself the most practical and observant of any Chemical author I have ever read, yet I am inclined to be sceptical as to the nitrogenous gas being the food of plants—because I have never observed or detected it in a solid form in any plant. That it does enter the air vessels in common with oxygen and carbonic acid, there can be no doubt; but I believe it is never decomposed, but always retains its *gaseous form;* but the carbonic acid is obviously decomposed,—the carbonic retained, and the oxygen thrown off.

About 16 years since, I was making a coal-pit, in which I put 10 cords of wood, and finding the carcase of a dead dog, out of curiosity I placed it in the pit. After the moisture of the wood was driven off by heat, I drew about 400 bushels of charcoal, and the carcase of the dog, hair and all, was completely charred. From this I infer that the carbon is solidified in vegetable and animal substances; but I could never discover any thing like oxygen or nitrogen in a solid form in coal-pits. I believe they are entirely driven off; but if we consider that carbonic acid is the result of all combustion and putrid fermentation, and that it is decomposed by plants, we shall cease to be surprised that its carbonic principle should be found so abundant in vegetable and animal substances. But truly I cannot conceive how oxygen or nitrogen can form any aliment of plants. Perhaps some of your correspondents can explain it to my understanding, and thereby oblige R. M. W.

Potter, March 4, 1835.

RECIPES, &c.

[Translated for Silliman's Journal of Science and Arts by Prof. J. Griscom.]

Easy method of giving greater strength and firmness to thread, net work, cordage and coarse cloth.—The lixivium of oak bark has been employed for scarcely any other purpose than that of the tanner, and yet it is applicable to a great variety of uses. If thread, cords, nets, coarse linen, &c. be steeped in it, they require greater firmness and durability. Fishermen have long resorted to this. Nothing is more apt to spoil than skins, and yet this preserves them. It is the same with hempen and linen cloth. They contain much gummy and resinous matter, which with tannin forms an envelop, and thus adds to their durability. Linen ought not to steep more than eight or ten days in this solution; it acquires a very brown color. When this color fades the operation may be repeated.

The best method of preserving nets and cordage is the following: dissolve two pounds of Flemish glue in fifteen gallons of water—dip the nets, &c. in this solution, and then steep them in a strong solution of oak or chestnut bark,—the tannin combines with the gelatin, and forms, between the fibres of the hemp, a solid net work which adds great strength to the cords. Any bark which contains tannin may be employed in making a decoction; so bones, parings of skins, remains of fish, &c. and generally all substances containing gelatin may be used in making a gelatinous solution. Fishermen who throw away on the shore gelatinous fish, may use them for this purpose.—*Jour. des Connais. Usuelles.*

A tried recipe for burns.—Keep on hand a saturated solution of alum (four ounces in a quart of hot water,) dip a cotton cloth in this solution and lay it immediately on the burn. As soon as it shall have become hot or dry, replace it by another, and thus continue the compress as often as it dries, which it will, at first, do very rapidly. The pain immediately ceases, and in twenty-four hours under this treatment the wound will be healed, especially if the solution be applied before the blisters are formed. The astringent and drying quality of the alum completely prevents them. The deepest burns, those caused by boiling water, drops of melted metal, phosphorus, gunpowder, fulminating powder, &c. have all been cured by this specific.—*Idem.*

THE FARMER.

INQUIRIES AND REMARKS ON THE EFFECT OF EXPOSING GYPSUM TO THE WEATHER.

Valmont, Jan. 23, 1835.

To the Editor of the Farmers' Register.

I have a parcel of Plaster of Paris which has been several months exposed in hogsheads to all the vicissitudes of weather, wet and dry, hot and cold, even to freezing. It is the leavings of a plaster yard, and this not completely ground, is mostly in a sandy state with some lumps; these lumps will crumble more easily than the lumps as we first receive it. I want to know whether it has totally lost its virtue, or to what extent, by exposure; and whether in preparing it for use, it would be proper to dry it over the fire—for it is quite wet, and seems very unwilling to surrender its moisture. As lime is one of its components, I presume it has been partially slaked, and is therefore more or less weakened. I have subjected it to one test which seems to indicate that it is not entirely destroyed. By heating, and then pouring water upon it, it runs together and forms quite a hard cement. For want of pot or pearl-ash I cannot try it by boiling with that, nor have I the means of determining whether the residuum would be carbonate of lime. When plaster is scattered over the earth it is immediately liable to this slaking process, (if it may be so called) and all the effects of sun, air, and rain; and universal experience I believe attests, that it is slow and *continuing* in its action, not producing its effect by any sudden and powerful impulse. Its action is so slow, that we have a right to suppose it is going on a long time—for months or years—long after the weakening effects of weather upon it have taken place. The result of an experiment at Dover, communicated some years ago to the Agricultural Society, Richmond, proved that the effects of plaster were visible fourteen years, I think, after the plaster was applied: and that I witnessed myself. The slow operation of plaster, results from its *modus operandi*, whether as an *absorbent*, by drawing and retaining moisture around the plant, or as a *solvent*, by preparing vegetable matter for its food. The only difference then, between the application of plaster in its fresh state and in that which I have supposed, is in the point of time whilst (in the first state) the dissolving or *slaking* process occurs. Now, what is the value of that difference?

I will trouble you with another question, whilst we are upon the subject. If plaster acts merely as an *absorbent*, of what consequence is the nature of the soil, provided it is loose enough to allow the powder to descend to the roots, and not so loose as to allow it to pass below them? If as a *stimulant* in any other way, why should not a moist soil be as sensible of its effects as a dry one, provided it is not so wet as to carry off the powder? Would you advise lime or plaster in a wet piece of ground—it being presupposed that all practicable means have been used to drain it? for I believe it may be considered an axiom in agriculture, that for whatever purpose land is intended, it must be laid as dry as possible.

If Mr. Editor, interrogatories generally betray ignorance, much more do they in this particular case—and taking to myself the *compliment* once paid to Pope, I might with propriety subscribe myself a? But not having pride enough to hide my ignorance, I give you my proper appellative, which you will recognize to be that of an old fellow-collegian. C. H. HARRISON.

[The foregoing inquiries proceed from one who has had far more practical experience of the use and effects of gypsum than we have gained—and if that mode of observation and of proof alone were to be the proper test, we ought to take refuge in our want of experience, and remain silent. But as most of the answers sought, must depend altogether upon the established chemical properties of the substances in question, we can scarcely err in deciding according to those properties; and the remarks which follow will be confined within such limits as will prevent our losing sight of this sure guide—without which, none will fail to wander into uncertainty and error.

The slaking of quicklime, alone, is no cause of injury, or weakening of its power—but as this process always precedes or accompanies the injury which is really caused by exposure to air, the slaking of lime is generally considered as evidence of some progress at least having been made in the lime's becoming carbonated, *effete*, or mild, or losing its peculiar qualities as caustic lime.—The newly burnt material for lime, (as shells or limestone,) greedily attracts moisture, and by uniting chemically with water alone, it slakes, but still retains all its caustic power, which depends not on the absence of water, but upon the deprivation of carbonic acid, which the lime had lost by burning. This acid next commences re-combining with the lime, to which it is strongly attracted, and is furnished by the atmosphere, and as well as by the earth, and by plants and other matters in a state of decomposition—and this process of re-combination is greatly hastened by the lime having been slaked, and thereby exposing a far greater attracting surface. Of course, the more it is spread to the air, or to whatever will furnish carbonic acid, the more rapidily the lime loses its caustic quality, until none remains. The lime now, as carbonated or mild, may be in most cases, as valuable a manure as when quick, (as we have elsewhere endeavored to show)—but as a material for cement, and for every purpose for which its caustic state was essential, the lime is weakened and indeed destroyed, by being changed to a different chemical substance.

The general understanding of this result of the exposure of lime, extends improperly to other substances of which lime forms the base, as gypsum, which is generally considered both by dealers in the article, and by many farmers, to be altered and injured by long exposure to air, if ground, and by rain, even in the unbroken stone. To determine whether there can be any such effect we must attend to the chemical combination of gypsum, and its state before and after such kinds of exposure.

Gypsum in its natural state is composed of lime, sulphuric acid, and water, the latter being as much a part of the chemical combination as either of the other ingredients. The mutual attraction of the lime and sulphuric acid is so strong, that no separation can be produced by any thing that air or rain can present. Neither can gypsum be wasted, any more than it can be decomposed, by air alone, or by remaining dry in powder. Water dissolves a very small proportion of gypsum—about one-six hundredth part—and therefore it will be slowly wasted by solution, if exposed to wet, and the fluid be allowed to pass off. The mere wetting, without the fluid sinking or flowing from the mass, however tending to make the gypsum troublesome in using, cannot change its nature, nor affect its value as manure. From these premises it may be inferred that the gypsum saved by our correspondent, is not altered in its chemical character—nor injured, except by being rendered more inconvenient to use—and also in this respect, that the portion previously wasted by the rains, was the part most finely pulverized, softest, and therefore the most fit for immediate action as manure.

Exposing gypsum to moderate heat has no effect except to drive off the water chemically combined, as well as any accidental supply of uncombined moisture. It would seem that merely the removal of its water could scarcely affect the action of the substance as manure. We incline to this opinion—but would not confidently assert that no injury can take place in this manner.—There is in this case a partial decomposition of the substance—and slight as it is, it may materially affect that fertilizing power which is in every aspect so mysterious and inexplicable. It is highly important that it should be proved by sufficient experiments whether a moderate degree of heat is injurious to the value of gypsum—for if it is not, by using heat to drive off the water chemically combined, the stone is made much more soft, and easier to pulverize for use.

These explanations may be considered by many and even by our friend who has suggested them by his inquiries, as too simple and trite to deserve being thus formally presented; and if so, our apology is, that many who are most conversant practically with the subject, show by their course that even these feeble lights might aid their deduction.

There is no known reason, derived from the theory of its operation, why lime (whether caustic or mild) should not act profitably on land not sufficiently drained, except in this respect, that improvements of every kind must avail but little on soils suffering from redundant moisture. As to gypsum on such soils, we know nothing, except the generally received opinion that on all wet land the application is unprofitable.]

[From the Farmers' Register.]

A PRODUCTIVE KIND OF CORN, AND THE MANNER OF ITS SELECTION.

Many years ago Mr. Cooper, a gentleman well known in Jersey as an experienced practical farmer, by a publication recommended that seed corn should be gathered from strong vigorous stalks which bore two ears. I was not then engaged in agriculture, but I well recollect the publication attracted some attention, though I am inclined to think the experiment was not made in this part of the country. A gentleman of Talbot, some years past, whether from the recollection of Mr. Cooper's suggestion, or from his own speculations, I know not, gathered his seed corn in this way, and became convinced of the advan-

tage. His neighbors who saw the increased product, obtained seed from him, and adopted his practice, which in time generally prevailed in Talbot, and has extended to this, and other counties of the Eastern Shore. I recollect a conversation with the late Col. Edward Lloyd on this subject: he was a man of sound judgement, and one of the best practical farmers on this shore. At that period he had not planted his corn, and having experienced in the course of his life both loss and disappointment from the representation of confident theorists and sanguine experimentalists, whose "geese grew into swans," he was in matters of this kind slow of faith; but he became convinced of its value by observation, and tested it by cultivation.

Four years ago I obtained some of this corn, which I have continued to plant since, always carefully gathering the seed according to the suggestion of Mr. C. and my crops have been much increased. My experience induces me to think, that no great advantage is derived if this corn is planted in lands naturally poor, or exhausted by cultivation; but where in a state of fertility either naturally or by improvements, I think the product from this kind of corn will be more than fifteen per cent.

WILLIAM CARMICHAEL.

Wye, Eastern Shore,
Md. Jan. 22, 1835.

THE BREEDER & MANAGER.

[From the Cultivator.]

SHEEP.

CANAAN CENTRE, FEB. 14th, 1835.

SIR—In the February number of the Cultivator, I noticed an extract on wintering sheep, to which I would wish to call the attention of wool growers, and to the truth and importance of which, I can fully attest. I have long believed that the principal cause of any great mortality among sheep, arose from want of sufficient feed, and proper care. It is undoubtedly very wrong to let sheep ramble over the fields after the nutriment of the grass on which they feed is materially injured by severe frosts. Sheds, for the shelter of sheep in winter are all important, as exposure to storms is very injurious to them, and I am of opinion, shelters built on the highest part of our pastures for flocks to flee to, in severe storms in summer, would be of great service, as they undoubtedly frequently contract diseases from exposures to long and cold rains, from which they never recover. During such exposure they contract violent colds, which finally become permanently seated on their lungs, and is, in my opinion, the cause of the loss of many sheep. This may be evident to all observing persons, (as they will notice that sheep after such rains are many of them troubled with the snuffles,) and shows the necessity of being very particular to house them during cold nights, and storms, immediately after shearing; the contrast being so great after losing their clothing, that a trifling exposure may prove fatal; and this precaution is more neccessary with fine flocks than with coarse, as they are naturally more delicate, and less able to endure great changes. Water, I also consider very important for sheep in winter, and when it is practicable, should be brought into their yards, so as to be convenient to them at all times. I have four flocks that drink at one trough, and I observe, that when they are feeding at the racks, the water trough will be thronged with sheep; some of them constantly leaving their hay for water, which satisfies me that convenient access to water, adds to their comfort, and consequently to the improvement of their condition.

The above remarks, if you think them worth it, you are at liberty to publish, but my principal object in this communication is, to give to the public, the result of my experience in rearing lambs; and which I am sensible will be lost to all those that neglect their flocks, and to most of those that do not attend to them personally; as care and prompt attention to all their wants is the great secret. To insure the life and health of every lamb, bearing ewes should all be in good condition; then lambs are as likely to live as the young of other animals; but if the ewes are feeble, they will have no milk to support their lambs if they should chance to be strong and healthy. Feeble sheep are often exhausted in bringing forth their young, and consequently will take no notice of them, and strong as well as feeble ones, sometimes need help at such times, which should be done with great caution; they should never be helped except when their pains are on, and when they are trying to help themselves; and the lamb should not be taken entirely away, but left so that the sheep will have to make a little exertion after she is left, otherwise if the sheep is at all wild, she will from fear of the person helping her, make her escape and take no notice of her lamb. I am in the habit of helping every sheep in that situation which I can come at, as it undoubtedly saves them much pain and exertion. Sheep should invariably be housed nights and stormy weather during the time of dropping lambs, and I have been in the habit of housing mine nights, till I wash them, to secure them from the ravages of the foxes. Sheep should have all the facilities for procuring fresh grass that is possible to give them, before and after the time of dropping their lambs, which adds greatly to the quantity as well as quality of their milk; but turning them out on the fields without close attention, is often the cause of losing lambs, as when they are dropt on the cold ground they often become chilled, so as to be unable to get up, and in a short time will be past recovery. When I have neglected mine in that way, and found one that has any life left, I take it immediately to a warm room, and put all but its head into a pail of warm water, and then rub it with a dry cloth till it begins to struggle for life; and I have never failed of restoring such lambs the use of their limbs, though I have found them so far gone as to be unable for some time to observe any expansion of the lungs, with their limbs perfectly stiff, and their jaws almost immoveably fixed. With such attention, you may have them running in about one hour, and to all appearance as strong as if nothing had happened to them; though they require a warmer atmosphere for some time than if they had not been chilled. Care should be taken not to feed them with milk, till they are sufficiently recovered, as there is danger of strangling them by the milk entering their lungs. I have had them injured in that way, which though they lived, would be a long time recovering from the effects of such treatment. Lambs will live twenty-four hours and even longer without any nourishment, and should not as a general rule be fed, till by their actions, you discover they are seeking food, and then they will in most cases drink without much trouble. Many lambs that it becomes necessary to feed, are lost for the want of sufficient food, through fear of over-feeding; but my experience teaches, that they should have all they will drink, and I let their own appetites govern. I have often had lambs of twenty-four hours old drink a pint of milk at once, and when they drink the most, feel the most assured of success in raising them. There will always in a large flock, be some that will not get milk enough. I am in the habit of making all such ones drink that I can, by taking a basin of milk and giving them my thumb to suck, so as to have a full supply once or twice a day, till the milk of the sheep increases by the growth of feed. The milk of such sheep as lose their lambs should not be lost, but kept for the support of those that have not a full supply; such sheep I manage to make own the lambs of others, so that I often have lambs that draw their living from two sheep through the season; this I do when I find the dead lamb before it is dry, by rubbing it over the lamb I wish to make the sheep own, and in that way deceive her, and make her think it her's. Where that will not answer, I skin the dead one, and sew the skin on to the live one, which generally answers the desired end; but in case of failure in both the above experiments, I tie up the sheep and fetter her in a small pen with the lamb and the other sheep, and hold her for the lamb to suck several times in a day, till she will own it. As a proof of the truth of what I have asserted, that care and prompt attention are the great secret of success, I will relate my success last year, which I am far from attributing to any good luck I have over others, as I believe that prosperity or adversity, in all such cases is the result of good or bad management, of care or neglect. Of one hundred and thirty-one lambs I had dropt last spring, I raised one hundred and twenty-six.

A few words as to future management and I have done. Lambs should always be left at home when sheep are to be washed, as they are saved much fatigue where the distance is considerable, and many accidents incident to a pen, crowded as they are at such times; besides the advantage of having the sheep go directly home without any trouble, after washing. Ticks are very injurious to sheep of all ages, but more so to lambs, as they have the trouble of them in summer; the ticks leaving the old ones for a more secure retreat on the lambs. To destroy ticks, I take 10 or 12 lbs. of tobacco stalks for one hundred lambs, (which I buy of the tobacconist for as many pence,) and at the time I shear sheep, put it into a tub sufficiently large to dip them in, and fill it with water, and let it soak six or eight days, when I get up my lambs, mark, dock, and alter them, then dip them into the tobacco juice; this not only kills the ticks, but is serviceable to the wounds made by docking and altering, and is all the remedy I ever apply to such wounds. Dipping the lambs in that way, two successive years, will destroy all the ticks in the flock.

The method of docking lambs by taking hold of the tail and cutting it off while the animal is struggling to escape, is very cruel; as it leaves the bone longer than the skin, which not only makes it very sore, but induces the flies to work at it, which endangers the life of the lamb. My method is, to have a man take up the lamb, and place the tail bottom upwards on the square edge of a block; then with a large knife, I crowd the skin which is loose up to the body, and strike the knife with a hammer, which leaves the skin longer than the bone, and consequently it closes together over the bone, and the wound heals in a short time. I alter lambs by cutting the pouch off close to the body, which leaves nothing to impede the shears, more than cording, and is attended with less trouble. Lambs that have much wool on them, should be sheared about the pouch, to prevent the blood and wool from becoming so hard as to obstruct the discharge of matter from the wound. Lambs should be weaned the last of August, and have a good chance for feed till November; then oats in the bundle two or three months, as their condition may require. I might write much more which would be useful to wool growers who are inexperienced, but I am already admonished that the length of this, may preclude its admission into your valuable paper.

DANIEL S. CURTIS.

J. Buel.

THE GARDENER.

[From Cobb's Silk Manual.]

CULTUE OF THE MULBERRY TREE.

The Chinese Mulberry.

Besides the varieties of the mulberry tree heretofore mentioned, there is one, which, if we may believe the recommendations, of it, is superior to all others for the culture of silk: I mean the Chinese mulberry.

The following account of it I derive from the second No. of the Silk Culturist, a valuable and useful work, published by Dr. Felix Pascalis, of New York. It is contained in a letter to the author from Havre.

"Samuel Perrottet, a member of the Linnæan Society of Paris, employed by government as a travelling botanist, returned to this port after a voyage of thirty-four months. He brought with him eighty-four boxes of various dimensions, containing one hundred and fifty-eight species of living plants, of at least eight feet in heighth, to the quantity of five hundred and thirty-four individuals. All these productions had been procured in the seas of Asia, or gathered on the coast or in the lands of Cayenne. From the commencement of the present century, there had never before been so vast an importation—one so extensive in number, for rare genera, species and families, and vegetable productions, or of their seeds. All of them passed under my examination, and they rather appeared to have come out of a green house than from a ship.

"In this immense collection was the *Morus Multicaulis*, thus called by Perrottet, for the first time ascertained to be the real Chinese mulberry, *Morus alba sinensis*, of which every silk grower and culturist should endeavour to multiply the species. It has been deposited in the Royal Garden. Monsier Perrottet says it grows with man shoots from the roots, with tend r stems and large foliage, of a much more nourishing nature than the Eur pean mulberry.

"Chinese inhabitants, assured him, that to this tree the disciples of Confucius are indebted for the prosperity and solidity of their empire.

"The *Morus multicaulis* is already propagating in many parts of France, and probably will be substituted and preferred to all the other varieties. Among the other qualities of the plant, it is affirmed in China that a less quantity of this foliage is required for the precious insects than of that which we are obliged to provide for them."

I have received half a dozen shrubs from Mr. Prince's Nursery on Long Island, which comprise six different varieties of the mulberry, one of which is the Morus multicaulis, and Mr. Prince writes to me that he has them for sale.*

During my late visit to Madame Parmentier's Nursery at Brooklyn, N. Y. in June, 1831, I saw several hundred of these plants, which looked very thrifty, bore very large leaves, seemed to take well to the soil, and grow with uncommon rapidity. I picked several leaves from them, each of which more than covered the crown of my hat. The leaves were given to the silk worms in my presence, and were devoured by them with great avidity. This lady has also twelve different varieties of the mulberry in her nursery, but this seems to be fast taking the place of all others.

I have two of the trees of this species growing in my garden now, (1833) which I obtained at that time and brought home with me. They have stood the severities of two of our northern winters, and survived without any protection or shelter from the weather.

Mr. Richard K. Haight, an intelligent merchant of the city of New York, has one hundred of these plants, which were imported from France the present season, which I saw in his nursery at Brooklyn in a flourishing condition. He has also some Chinese mulberry trees of a different character, which he has imported with great care, and which may prove upon experiment to be valuable.

I obtained the following additional particulars in regard to this variety, and also that of the Dandolo mulberry, from Mr. Kenrick's valuable treatise on fruits, just published.

Morus Multicaulis.

This is a new and most valuable species of Mulberry, for the nourishment of the silk worm, which is represented as possessing such decided superiority over all others, as to be speedily substituted for them in every region of the globe.

This tree has not yet, to my knowledge, borne fruit in America. It was even unknown in Europe as a fruit tree, till in 1830, for the first time, it produced its fruit in France. The fruit, according to M. Audibert, was produced in great abundance; it was long, black, and of sufficiently beautiful appearance; its taste very good, having a taste intermediate between the red and black mulberry. The tree is very vigorous and upright in its growth. The leaves, in a light, friable, rich, and humid soil, are large and cordiform, but in dry and arid soil, they are of less size, eliptical, and without the heart-shaped indentation; their breadth is stated to be six inches, and their length eight; but in rich soils they are sometimes eight inches in breadth, and ten in length, or even more. They are curled or convex on their surface, of a deep shining green, and eminently beautiful.

Remarks on the culture and uses of the Morus Multicaulis, by M. Perrottet, Agricultural Botanist, and Traveller of the Marine and Colonies.—From the "Annales of Fromont."

"The *Morus multicaulis*, which we noticed for the first time in the *Annales de la Societie Linnenne de Paris for* 1824, appears to have originated in the elevated regions of China: from whence it has been disseminated throughout the low plains near the sea shore. It is believed it is cultivated in all parts of that vast empire, where the education of the silk worm is an object of commercial importance. From Canton it was introduced into Manilla, and all the islands in the Asiatic Archipelago, where it was only cultivated for ornamenting gardens. The Chinese are entitled to the credit of this introduction, who, in emigrating from their country, have from motives of industry endeavored to multiply it, that they might render it useful to them, in the new country of their adoption.

"The fortunate discovery of this precious shrub occurred in the garden of a Chinese cultivator at Manilla, who, after having informed us of its properties, and the important purpose for which it was used in his own country, yielded to our solicitations, and sold us two bushels for ten Spanish piastres, assuring us that he had introduced it into Manilla, where it had been considerably extended.

"In August we brought it from Manilla, the capital of the Phillippine Islands, and first introduced it into the isle of Bourbon, from thence into Cayenne and France. At a later period it was sent from Cayenne to Martinique, and from France to Guadaloupe, and also to Senegal, where it has been considerably multiplied. The numerous plants which are already disseminated in the divers climates of Africa, America, and Europe, have been all produced from the two individuals, which we procured at Manilla.

* * * "Among the number of mulberries now cultivated by the Chinese, for the education of silk worms, the *Morus Multicaulis* appears to be the most esteemed of all, not only for the facility with which it is propagated and grows, but still more for the essentially nutritive properties which the leaves possess. We have been enabled to verify this important fact during the five years which we passed in Senegal. * * * The characters which essentially distinguished this mulberry from the other varieties, are those which result, 1st, from the remarkable property which the roots

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* I have seen a few of the plants of the *Morus multicaulis* in the Kenrick Nursery at Newton, which were transplanted from Mr. Prince's the present season, (1831,) and are now in a flourishing condition. Our nurserymen will find it for their interest to propagate this plant as extensively as they can for the present, by inoculating and grafting.

possess of throwing up numerous small flexible stalks, without forming a principal trunk; 2d, from the great length which these stalks assume in a short time; 3d, from the remarkable development which the thin, tender, and soft leaves speedily acquire, and the promptitude with which they are renewed. * * * And 4th and lastly, from the extraordinary facility with which the stalks and branches strike root, as cuttings, without particular care, even before they have acquired a ligneous consistence.

* * * "Besides the advantages which we have already named, we may still add, that they are admirably calculated for forming regular plantations; it not being natural to grow tall or form any trunk properly so called, they can be placed very near without any injurious effect; and by heading down the stalks annually near the ground, a rich vegetation is produced, with a complete development of vigorous branches and leaves; and finally it is easy to multiply them by thousands from the roots in the course of a year, and to form vast and regular plantations of them the second. But a few years then are sufficient to obtain considerable fields of them in full vigour, sufficient to support an immense quantity of silk worms, and that with the greatest facility, as they are reproduced in a manner almost indefinite. * * * Regular plantations of it can be formed without difficulty, by planting the shrubs at a distance of six or eight feet from each other, a space sufficient for the extension of the branches, to facilitate the culture and for collecting the leaves. This last operation is so much facilitated by the flexibility of the stalks, that a child is sufficient for furnishing the food of a large establishment of silk worms.

Climate, Soil, &c.—* * * "This species will be readily acclimated in Europe; because it originated in an analogous region as to climate, to that which we inhabit. It appears not to suffer from the excessive cold of the northern, or the intense heat of the intertropical regions; for the plants deposited in the gardens of the government at Cayenne, acquired in the space of eight months a truly remarkable development, and at the time of our departure from that colony, in June, 1821, they were clothed with leaves of an extraordinary size. Those also which we cultivated at Senegal, although situated under a dry and scorching sky, and planted in an arid soil, offered an appearance sufficiently satisfactory, but they had acquired less development in all respects, than those which have vegetated under the humid climate of Guiana. It appears expedient then, that plantations of this mulberry should be made upon a humid rather than a dry soil, to obtain in all respects a satisfactory result.

* * * * "Besides, this mulberry braves the most rigorous winters. We saw on our arrival, at Havre, in July last, in the field of M. A. Eyries, plants, which had endured, in the open ground, the winter of 1828, and which appeared vigorous and beautiful."—Thus far M. Perrottet.

On this last and other points, let us now hear the testimony of M. Poiteau, in the *Annales d'Horticulture*, 1830.

"By the information which we receive from all quarters, it appears that this mulberry is destined to replace the common white mulberry, everywhere, for nourishing silk worms; its property of continuing low and bushy, so that the leaves can always be gathered without a ladder; and the large size, abundance, and tenderness of the leaves cannot fail to give it a decided preference. It has been sufficiently ascertained, that they are eaten with avidity by the silk worms, and that the silk which they form is of the first quality. This mulberry has not suffered in the least from the rigours of the last severe winter.

"The zealous traveller, who has given to France, America, and Africa, this precious plant, has acquired a just claim to public gratitude, and it is not only easy, but proper, to give him at this time a proof of it, by affixing his name to the tree which has given him celebrity and which will contribute so much to the prosperity of French Industry." * * * *Note to the Perrottet Mulberry (Morus Multicaulis.)*

M. Audibert is also decidedly of the opinion that the best mode of cultivating the *Morus Multicaulis*, for the support of silk worms, is in hedges with low stocks. M. Barthere of Toulouse in the South of France, who has considerably extended their cultivation, fully coincides in the same opinion; and is confident that in grounds and vineyards which could hardily give two per cent, this tree will now insure ten per cent.

This tree, according to M. Perrottet and Dr. Deslongchamps, is easily propagated either by layers, by cuttings, or even by cuttings of a single eye, placed beneath the surface and shaded from the noonday sun.

The experiments instituted at Paris by Dr. Deslongchamps, have confirmed all that had been previously asserted respecting the quality of the silk produced by this plant; he has further stated, that the cocoons, made by the worms fed only on this plant, are even rather heavier.

Dr. Felix Pascalis, in an article in Silliman's Journal of Science for July, 1830, after informing us that in the preceding March he had received two plants of this mulberry from France, has added—"After the discovery of this plant, a doubt no longer exists, that two crops of silk may be raised in a single season."

At Madam Parmentier's Horticultural establishment, two crops of silk were produced in the summer of 1832. The first were fed promiscuously on the *Morus Multicaulis*, *Morus Alba*, and other mulberries. The cocoons thus produced were about two-thirds white and the remainder of an orange colour. A suitable portion of these cocoons were collected for seed, having no regard to colour:—These being subjected to the hatching process, produced a second crop the 30th of July. These last were fed exclusively on the *Morus Multicaulis:* they passed through the different stages of their larva existence in the short space of 26 days. The cocoons which were obtained from this second crop were of a *much larger size* than those of the first crop, but what is of still more consequence *they were of the whiteness of snow, and have a most beautiful shining appearance.* (See New England Farmer, vol. xi. No. ii.) At Madam Parmentier's in 1831, I witnessed the silk worms feeding with avidity on the leaves of the *Morus Multicaulis*, and was informed that they had left eleven other species of mulberry to feed on this. At that place we are also informed, the *Morus Multicaulis* has withstood the rigours of the last six winters uninjured and unprotected. Although being possessed of an active and prolonged vegetation, it is not to be expected that the unripened wood of the tender tips should always escape.

I introduced this plant to Massachusetts in the spring of 1831, from the Messrs. Prince of the Linnæan Botanic Garden, Flushing; I also received plants of the same from Madam Parmentier's of Brooklyn. L. I. and I have also received them from France from M. Andre Micheaux, author of the *American Sylva.*

[From the Horticultural Register.]

We recommend an attentive perusal of the following communication, not only on account of the information it contains, but also because it is a perfect example of the success which usually attends acute and intelligent observation and reasoning combined with real practice.—T. G. F.

ON THE CULTIVATION OF ASPARAGUS.

Having had considerable experience in the cultivation of asparagus, and been so far successful as to raise it nearly two inches in diameter, or between five and six inches in circumference, some of which I exhibited at the Massachusetts Horticultural Society, in the spring of 1833, and which obtained the Society's premium for the largest and best asparagus: having, also, for several years past sold in Quincy market from seventeen to twenty-five cents the bunch, when the same sized bunches of the common kind were selling from six to ten cents, I am induced at this time to inform you and the public of my method of growing this delicious vegetable. I sow the seed in the same manner and time with blood beets in the spring, preparing the ground in the same way, as the young or seedling plants will thrive in soil that will grow good beets. I generally sow, and think it the best way, one row of beets and another of asparagus alternately, one foot asunder, which brings the beet rows two feet apart, the proper distance for this vegetable.

As asparagus makes a very small growth the first season it will not in the least interfere with the beet crop; on the other hand, I think it is rather an advantage to the growth of asparagus, as the large leaf of the former serves to protect the weak and slender shoot of the latter.

The nature of the plants likewise differs so materially, one having a long tap root, calculated to draw deep from the soil, the other very small fibrous roots, which invariably, in this plant more than any I have observed, draw juices from the surface; in this case neither draws food from the other, as is apt to be the case when different vegetables of the same habits and wants grow near each other.

The second season after sowing it will be necessary for the asparagus to occupy the whole ground, the rows being two feet apart, a very proper distance; as the plant makes a large growth the second year, they may stand in the seed rows within an inch of each other. By the above method I have raised from 2 to 5000 roots a year, which I have sold.

In choosing and preparing the ground for putting down an asparagus bed, as it is called, I select a piece of ground that has been under tillage the year previous; a sandy loam if I have it; if

not, I add sand, the washings of roads or other materials, to bring it as near the nature of the above named soil as possible. I then plough very deep if the soil will admit, 10 inches or more; cart on and spread about twenty cart loads of manure, or in that proportion to the acre. I prefer fresh or unfermented horse manure for this as well as for most other crops. After this, cross-plough not quite so deep as before, and trench furrow by running a plough both ways in the same furrow, four feet apart; clear out the trenches with a shovel ten inches deep and one foot wide at the bottom, throwing the earth into ridges between the rows as even as possible; lastly, I draw in from the sides of the trenches a small quantity of fine earth, about one inch deep, levelling it with the hoe as it is drawn in, and the ground is prepared for planting. It is very important that the roots should be taken up carefully and exposed as little to the sun and air as possible previous to planting. My method is to start them from the seed bed and put them under cover or into the cellar as soon after digging as possible; then part the roots, which come up in bunches, snarled together, cut off the fingers (so I name the roots) that are broken and ragged and pack them away in meadow moss until I am ready for planting, which is performed as follows: The roots are taken to the field in a basket, packed in moss, and lifted out as you plant, placing them in a straight line on the bottom of the trench, from twelve to fourteen inches apart, taking hold of the crown of the root and pressing it gently down, carefully spreading the roots or fingers horizontally in every direction, as the roots of asparagus naturally grow horizontal—and the fibres or feeders extend upwards to the surface; this I ascertained by examining a bed that had been hoed after cutting time, in June, immediately before a smart shower. The surface of earth was literally covered with small white fibrous roots. As the bed was situated at the brow of a large hill, a part of it was gullied by the water in one or two places below the main roots, where I had a fine opportunity to examine both roots and fibres. There were few, if any fibres two inches below the main roots, notwithstanding that the bed was put down according to the old method, deep trenching, and filling in six inches below the roots with good rotten manure, which I found safely deposited in rather adecomposed state, having laid several years without being disturbed either by roots, fibres, worms, or weather. It is necessary for a man to follow immediately after the one that places the roots in the bottom of the trench, who has some skill in the use of the hoe; moving backwards, taking care to step each side of the roots in the trench, so as not to disturb them, and with his hoe scraping from each side of the trench regularly, so as to cover the crown of the roots about three inches; and the planting is completed. A field or bed managed in this way has a handsome appearance the first season, if the ridges are kept neat and in a workmanlike manner. Between the rows of asparagus on the top of the ridges, I usually grow a very fine crop of tap rooted plants, which does not in the least injure it the first summer.

After the asparagus shoots have made their appearance about six inches above ground it is a good plan to draw a little earth around the stalks about an inch deep, so as to kill the weeds, which may be repeated in the course of the season without injuring the rows of roots on the ridge. The second year after planting, as soon as the frost is out of the ground, spread along in the trenches, which will then be three or four inches deep, about one inch of light compost manure; then with a plough back furrow every row separately, turning the furrows directly over the asparagus, making two bouts to a row, rake or cross harrow, and the bed will be level, requiring no more care that season except keeping down the weeds. The third spring, as soon as the weather permits, burn the old stalks on the ground, spread at the rate of twenty cart loads per acre, of good compost or horse manure, and plough it in, taking care to turn narrow furrows and not so deep as to injure the crown of the root; then rake or harrow, and the bed will be in readiness for gathering, or cutting, which should be done in the following manner: As soon as the shoots project 5 or 6 inches above the ground, and before the buds begin to open, cut them off with a knife about one inch or less below the surface of the ground (not three or four as is recommended by some theorists,) as all that grows below the surface is stringy and tough and not fit to eat. The old stump immediately decays, and makes the best of food for the plants. I continue cutting, about two months from the time I begin in the spring, having no regard to the twenty-first day of June, or any other particular day, as the plant naturally produces a given quantity of shoots every season, without injury to the roots.

The above method should be pursued yearly, as long as the bed lasts, which in this climate, I presume will continue to produce well from thirty to forty years, under the above treatment. The bed that produced the large shoots I spoke of, was put down in 1819; in 1833, the season I sold my farm, the produce was equal, if not superior, to any former year. Yours, &c.

D. CHANDLER.

Thompson Island, Feb. 9, 1835.

MISCELLANEOUS.

WHEAT FIELDS should be examined to ascertain if the water courses are free from obstructions. Thaws not unfrequently occur during the winter, and furrow drains become choked with snow, ice, and earth, especially if they have not been well cleared of loose earth the previous autumn. Geese often stray upon wheat fields during thaws and do much injury. Whenever open weather occurs during winter, the first inquiry ought therefore to be, "Where are the geese?"

A farm near Monmouth in New Jersey, which was purchased a few years ago for about two dollars an acre, recently sold for thirty. This extraordinary increase of value has been produced by the effect of marl upon the soil. From this, many of our fellow-citizens in the country can infer what treasures they possess, either on their own lands or within reach of them. Land owners throughout Maryland are greatly indebted to the Legislature for providing for a full geological examination of every county in it.

[From the American Farmer.]

A TABLE

Shewing the number of Spaces contained in an Acre of Land, at various given distances.

Feet.		Feet.		Feet.		Feet.	
40	by	40	27	17	by	17	150
39	"	39	28	do	"	16	160
38	"	38	30	do	"	15	170
37	"	37	31	do	"	14	180
36	"	36	33	do	"	13	197
35	"	35	35	do	"	12	213
34	"	34	37	do	"	11	232
33	"	33	40	do	"	10	256
32	"	32	42	do	"	9	284
31	"	31	45	do	"	8	320
30	"	30	48	do	"	7	366
29	"	29	51	do	"	6	427
28	"	28	55	do	"	5	512
27	"	27	59	16	"	16	170
26	"	26	64	do	"	15	181
25	"	25	69	do	"	14	194
24	"	24	75	do	"	13	209
23	"	23	82	do	"	12	226
22	"	22	90	do	"	11	247
21	"	21	98	do	"	10	272
20	"	20	108	do	"	9	302
do	"	19	114	do	"	8	340
do	"	18	121	do	"	7	388
do	"	17	128	do	"	6	453
do	"	16	136	do	"	5	544
do	"	15	145	15	"	15	193
do	"	14	155	do	"	14	207
do	"	13	167	do	"	13	223
do	"	12	181	do	"	12	242
do	"	11	198	do	"	11	264
do	"	10	217	do	"	10	290
do	"	9	242	do	"	9	322
do	"	8	272	do	"	8	363
do	"	7	311	do	"	7	414
do	"	6	363	do	"	6	484
do	"	5	435	do	"	5	580
19	"	19	120	14	"	14	222
do	"	18	127	do	"	13	239
do	"	17	134	do	"	12	259
do	"	16	143	do	"	11	282
do	"	15	152	do	"	10	311
do	"	14	163	do	"	9	345
do	"	13	176	do	"	8	388
do	"	12	191	do	"	7	443
do	"	11	208	do	"	6	518
do	"	10	229	do	"	5	622
do	"	9	254	13	"	13	257
do	"	8	286	do	"	12	279
do	"	7	327	do	"	11	304
do	"	6	390	do	"	10	335
do	"	5	458	do	"	9	373
18	"	18	134	do	"	8	418
do	"	17	142	do	"	7	478
do	"	16	151	do	"	6	558
do	"	15	161	do	"	5	670
do	"	14	172	12	"	12	302
do	"	13	186	do	"	11	330
do	"	12	201	do	"	10	363
do	"	11	220	do	"	9	403
do	"	10	242	do	"	8	453
do	"	9	268	do	"	7	518
do	"	8	302	do	"	6	605
do	"	7	345	do	"	5	720
do	"	6	403	11	"	11	360
do	"	5	484	do	"	10	396

Ft.		Ft. In		Ft.		Ft. In.		Ft.		Ft. In.		Ft.		Ft. In.		Ft.		Ft. In.		Ft.		Ft. In.	
11	by	9	440	8 6	by	3 6	1464	6	"	3 9	1936	5	by	5 0	1742	4	by	2 3	4840	3	by	2 3	6453
do	"	8	495	do	"	3 0	1708	do	"	3 6	2074	do	"	4 9	1834	do	"	2 0	5445	do	"	2 0	7260
do	"	7	565	do	"	2 6	2049	do	"	3 3	2233	do	"	4 6	1936	do	"	1 9	6222	do	"	1 9	8297
do	"	6	660	do	"	2 0	2562	do	"	3 0	2420	do	"	4 3	2049	do	"	1 6	7260	do	"	1 6	9680
do	"	5	792	do	"	1 6	3416	do	"	2 9	2640	do	"	4 0	2178	do	"	1 3	8712	do	"	1 3	11616
10	"	10	435	do	"	1 0	5124	do	"	2 6	2904	do	"	3 9	2323	do	"	1 0	10890	do	"	1 0	14520
do	"	9 6	458	8	"	8 0	680	do	"	2 3	3226	do	"	3 6	2489	3 9	"	3 9	3097	2 9	"	2 9	5760
do	"	9 0	484	do	"	7 6	726	do	"	2 0	3630	do	"	3 3	2680	do	"	3 6	3318	do	"	2 6	6336
do	"	8 6	512	do	"	7 0	777	do	"	1 9	4148	do	"	3 0	2904	do	"	3 3	3574	do	"	2 3	7040
do	"	8 0	544	do	"	6 6	837	do	"	1 6	4840	do	"	2 9	3168	do	"	3 0	3872	do	"	2 0	7920
do	"	7 6	580	do	"	6 0	905	do	"	1 3	5808	do	"	2 6	3484	do	"	2 9	4224	do	"	1 9	9051
do	"	7 0	622	do	"	5 6	990	do	"	1 0	7260	do	"	2 3	3872	do	"	2 6	4646	do	"	1 6	10560
do	"	6 6	670	do	"	5 0	1089	5 9	"	5 9	1317	do	"	2 0	4356	do	"	2 3	5162	do	"	1 3	12670
do	"	6 0	726	do	"	4 6	1210	do	"	5 6	1377	do	"	1 9	4978	do	"	2 0	5808	do	"	1 0	15840
do	"	5 6	792	do	"	4 0	1361	do	"	5 3	1442	do	"	1 6	5808	do	"	1 9	6637	2 6	"	2 6	6969
do	"	5 0	871	do	"	3 6	1555	do	"	5 0	1515	do	"	1 3	6969	do	"	1 6	7744	do	"	2 3	7740
do	"	4 6	968	do	"	3 0	1815	do	"	4 9	1594	do	"	1 0	8712	do	"	1 3	9272	do	"	2 0	8712
do	"	4 0	1089	do	"	2 6	2178	do	"	4 6	1683	4 9	"	4 9	1930	do	"	1 0	11616	do	"	1 9	9956
do	"	3 6	1244	do	"	2 0	2722	do	"	4 3	1782	do	"	4 6	2037	3 6	"	3 6	3555	do	"	1 6	11616
do	"	3 0	1452	do	"	1 6	3630	do	"	4 0	1893	do	"	4 3	2157	do	"	3 3	3829	do	"	1 3	13939
do	"	2 6	1742	do	"	1 0	5445	do	"	3 9	2020	do	"	4 0	2292	do	"	3 0	4148	do	"	1 0	17424
do	"	2 0	2178	7 6	"	7 6	774	do	"	3 6	2164	do	"	3 9	2445	do	"	2 9	4525	2 3	"	2 3	8604
do	"	1 6	2904	do	"	7 0	829	do	"	3 3	2330	do	"	3 6	2620	do	"	2 6	4978	do	"	2 0	9680
do	"	1 0	4356	do	"	6 6	893	do	"	3 0	2525	do	"	3 3	2821	do	"	2 3	5531	do	"	1 9	11062
9 6	"	9 6	482	do	"	6 0	968	do	"	2 9	2754	do	"	3 0	3056	do	"	2 0	6222	do	"	1 6	12906
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do	"	6 0	764	do	"	2 6	2323	do	"	1 0	7575	do	"	1 3	7336	do	"	2 9	4873	do	"	1 0	21780
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do	"	5 0	917	do	"	1 6	3872	do	"	5 3	1508	4 6	"	4 6	2151	do	"	2 3	5956	do	"	1 6	16594
do	"	4 6	1035	do	"	1 0	5808	do	"	5 0	1584	do	"	4 3	2277	do	"	2 0	6701	do	"	1 3	19913
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do	"	3 0	1528	do	"	6 0	1037	do	"	4 3	1863	do	"	3 6	2765	do	"	1 3	10722	do	"	1 3	23232
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do	"	1 6	3056	do	"	4 6	1382	do	"	3 6	2262	do	"	2 9	3520	do	"	2 9	5289	do	"	1 0	34848
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do	"	5 6	731	do	"	4 9	1528	do	"	1 9	4741	do	"	3 3	3350								
do	"	5 0	1024	do	"	4 6	1613	do	"	1 6	5531	do	"	3 0	3630								
do	"	4 6	1138	do	"	4 3	1708	do	"	1 3	6637	do	"	2 9	3960								
do	"	4 0	1281	do	"	4 0	1815	do	"	1 0	8297	do	"	2 6	4356								

ALOES.—The French have discovered a new mode of administering this bitter drug. Since their occupation of Algiers, they have ascertained that it has properties not only internally drastic but externally compressive. In other words, they have found that the aloe contains the material of rope of very superior quality. A long series of experiments are said to have been made at Toulon, to ascertain the comparative strength of cables manufactured from hemp and from aloe, they all resulted in favor of the latter. Of cables of equal size, that made of aloe, raised a weight of two thousand killogrammes; that made of hemp a weight of only four hundred killogrammes. —[*N. Y. Com. Adv.*

A man without modesty is lost to all sense of honor and virtue.

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Barney's fine Mutton—Measuring distance by hours—Nature of earths with reference to the growth of plants—Food of plants—Recipe, for giving greater strength to net work, &c.—do. for burns—On exposing Gypsum to the weather—Productive Corn—Sheep Management—Culture of the mulberry, *Morus Multicaulis*—Cultivation of Asparagus—Wheat fields in winter—Great rise in the value of land by marling—Space table—Aloe, *vs.* Hemp.

BALTIMORE PRODUCE MARKET.

☞ *These Prices are carefully corrected every* MONDAY.

	PER.	FROM	TO
BEANS, white field,	bushel.	2 00	2 50
CATTLE, on the hoof,	100lbs.	——	6 00
Slaughtered,	"	3 00	4 00
CORN, yellow,	bushel.	65	66
White,	"	66	67
COTTON, Virginia,	pound.	16	17½
North Carolina,	"	——	——
Upland,	"	17¼	18½
FEATHERS,	pound.	35	37
FLAXSEED,	bushel.	1 37	1 50
FLOUR—Best white wheat family,	barrel.	6 00	6 50
Do. do. baker's	"	5 75	6 25
Do. do. Superfine,	"	5 00	5 25
Super Howard street,	"	5 00	——
" " wagon price,	"	4 87	——
City Mills, extra,	"	——	——
Do.	"	5 25	——
Susquehanna,	"	——	——
Rye,	"	——	——
GRASS SEEDS, red Clover,	bushel.	4 75	5 25
Timothy (herds of the north)	"	2 50	3 00
Orchard,	"	3 00	——
Tall meadow Oat,	"	2 00	2 50
Herds, or red top,	"	1 25	——
HAY, in bulk,	ton.	——	——
HEMP, country, dew rotted,	pound.	6	7
" water rotted,	"	7	8
HOGS, on the hoof,	100lb.	6 00	——
Slaughtered,	"	——	——
HOPS—first sort,	pound.	12	——
second,	"	10	——
refuse,	"	8	——
LIME,	bushel.	33	35
MUSTARD SEED, Domestic,	"	5 00	6 00
OATS,	"	31	33
PEAS, red eye,	bushel.	——	——
Black eye,	"	87	1 00
Lady,	"	100	——
PLASTER PARIS, in the stone,	ton.	3 00	——
Ground,	barrel.	1 37	——
PALMA CHRISTA BEAN,	bushel.	1 50	1 56
RAGS,	pound.	3	4
RYE,	bushel.	66	——
TOBACCO, crop, common,	100 lbs	4 25	5 00
" brown and red,	"	5 00	7 00
" fine red,	"	7 00	9 00
" wrappery, suitable for segars,	"	6 00	12 00
" yellow and red,	"	8 00	12 00
" yellow,	"	9 00	12 00
" fine yellow,	"	12 00	16 00
Seconds, as in quality,	"	4 00	5 00
" ground leaf,	"	5 00	9 00
Virginia,	"	5 00	10 00
Rappahannock,	"	——	——
Kentucky,	"	6 00	9 00
WHEAT, white,	bushel.	1 05	1 15
Red,	"	1 00	1 06
WHISKEY, 1st pf. in bbls.	gallon.	32	—
" in hhds.	"	31	32
" wagon price,	"	27½	—
WAGON FREIGHTS, to Pittsburgh,	100 lbs	1 75	——
To Wheeling,	"	2 00	——
		washed.	*unwash*
WOOL, Prime & Saxon Fleeces,	pound.	52 *to* 62	26 *to* 28
Full Merino,	"	46 52	24 26
Three fourths Merino,	"	39 46	23 24
One half do.	"	35 39	23 24
Common & one fourth Meri.	"	32 34	22 24
Pulled,	"	33 35	23 26

BENE SEED.

JUST RECEIVED at this Establishment, and for sale, by the pound or in 12½ cent papers, a small quantity of the seed of this most valuable plant. It is very efficacious in the Bowel Complaints of children, and not difficult to be administered. The seed should be planted in April, in hills like beans, and the leaves will be in perfection in June. Two or three leaves being put into a tumbler of spring water, for 10 or 15 minutes, convert it into a mucilage, which being tasteless, children readily drink.

BALTIMORE PROVISION MARKET.

	PER.	FROM.	TO.
APPLES,	barrel.	$3 00	$5 00
BACON, hams, new,	pound.	11	——
Shoulders,	"	8	9
Middlings,	"	——	——
BUTTER, printed, in lbs. & half lbs.	"	25	37
Roll,	"	15	25
CIDER,	barrel.	——	——
CALVES, three to six weeks old	each.	3 00	6 00
COWS, new milch,	"	17 00	30 00
Dry,	"	6 00	10 00
CORN MEAL, for family use,	100lbs.	1 50	——
CHOP RYE,	"	1 50	——
EGGS,	dozen.	19	20
FISH, Shad, salted,	barrel.	5 75	6 00
Herrings, salted, No. 1,	"	4 75	——
Mackerel, No. 1, 2 & 3,	"	5 50	7 00
Cod, salted,	cwt.	2 50	3 00
LAMBS, alive,	each.	1 25	2 00
Slaughtered,	quarter	31	50
LARD,	pound.	8	9
ONIONS,	bushel.	62	75
POULTRY, Fowls,	dozen.	1 50	2 25
Ducks,	"	——	2 50
POTATOES, Irish,	bushel.	40	62
Sweet,	"	——	——
TURNIPS,	"	37	50
VEAL, fore quarters,	pound.	3½	4
Hind do.	"	6¼	——

ADVERTISEMENTS

WANTED,

A GOOD JACK & JENNY, or either, for which a fair price will be paid. Address, with *minute description* as to age, color, height, size and general appearance, character as a breeder, and *price*,

I. I. HITCHCOCK,
mh 17 Amer. Far. Estab.

AGRICULTURAL IMPLEMENTS, GRASS SEEDS, &c.

SINCLAIR & MOORE offer for sale at the Maryland Agricultural Repository, Light street, near Pratt street wharf, a general assortment of PLOUGHS of the most approved kinds, adapted to the different kinds of lands and various purposes of the farmer.

Among them are the self-sharpening Plough, which has the advantage of a moveable steel point from 15 to 24 inches long, which can be reversed, as a bevel is formed by wearing, and advanced as it becomes shorter, so as to bring into actual wear from 12 to 18 inches of solid wrought bar—of assorted sizes, from the small seed plough to large three horse.

Wood's patent Plough, of assorted sizes, with cast shares
Sinclair & Moore's improved do do do do
McCormick's improved do do wrought shares
Barshear, from 1 horse to heavy 3 horse, do do
Cary Plough, having the shape of the old well known Cary, but has a cast mould board and wrought share —2 sizes
Buffalo Plough, a well formed mould board for stiff lands, with cast shares
Double and single shovel Ploughs. ALSO,
Cultivators, with wrought and cast tires
Do do made to expand
Harrows of different sizes and forms
Wheat Fans, from 15 to $35
Corn Shellers of the best patterns
Cylindrical Straw Cutters, 20 inch box, adapted to horse or water power, capable of cutting 75 to 100 bushels per hour, price $75
14 inch box hand power, 45
11 inch do do do 27

And a general assortment of small articles—such as Hay and Manure Forks: Spades; Shovels; Mattocks; Picks; Hoes; Trace Chains; Hames; Straw Knives.—Also, Thompson's superior cast steel Axes, and other Tools, wove Wire for fans, screens, cellar windows, &c.

FIELD SEEDS—Clover, timothy, herds, orchard grass, tall meadow oat grass seed, and millet seed at lowest market prices—150 bushels prime seed oats.

March 10.

POINTER.

A FIRST rate Pointer Slut, of pure blood, 6 months old, for sale at this establishment. mh 17

FRESH GARDEN SEED.

THE Subscriber has just received by the ship Canada a splendid assortment of English and Dutch Garden and Field Seeds. The respectability of the gentleman by whom these seeds were raised warrants me in recommending them with perfect confidence. But to be certain of the quality and to prevent disappointment to purchasers, proof samples of each sort are taken and will be fully tested in hotbeds prepared for the purpose.

The most prominent received are—

600 lbs. Cabbage Seed, principally of Early Scotch York, Large York, Bullock's Heart, Early George, Sugar Loaf, Drum Head and Flat Dutch. The above named Early York is the dwarf or short stalk variety raised by one of the first Gardeners near Edinburgh.

500 lbs. Mason's short top scarlet, red, and white Turnip, long white and salmon Radish Seed.

50 lbs. Salsafy or Vegetable Oyster.

8 bushels broad Windsor, long pod, and other English Beans.

10 lbs Early and Late Cauliflower Seed, raised from the large Dutch Cauliflower. The quality of this seed may be estimated by reference to the Cauliflowers, whose merits received the premium from the Horticultural Society last year.

10 lbs. Brocoli Seed, finest English sorts.

100 bushels Early and Marrowfat Peas, among which are Bishop's early Dwarf, Spanish Dwarf Fan and Knight's Dwarf, Honey, all fine new sorts, very prolific and growing, only 12 inches high.

375 lbs. Early Dutch Turnips, white Tankard, Yellow Bullock, White Globe and Dale's new Hybred Turnip Seed.

15 lbs. Borecole or Kale Seed of various sorts.

FIELD SEEDS.

30 bushels St. Foin or Espersett and Field Burnett; Spring Vitches or Tares; 100 lbs. Mangold Wurzell; 10 bushels early Potatoes; 5 best English sorts; 10 bushels English Lawn Grass; 200 lbs. Mustard Seed; 15 bushels Perennial Ray Grass; 300 lbs. Rape or Cole Seed; 20 bushels English Oats; 3 best sorts; 300 lbs. white Dutch Clover; 360 lbs. Lucerne; also a small parcel of Yellow and Scarlet Trefoil, &c.

IN STORE.

Parsnip Seed, Carrot, Lettuce, Beet, Cress, Cucumber, Cantaloupe, Onion, Squash, Corn Salad, Artichoke, Swiss Chard, Celery, &c. Nearly all the last named Seeds were raised by R. S. Senr. at the Clairmont Nursery, and are of the finest quality.

Orders for Fruit Trees, Shrubs and Plants received. For particulars, see catalogues; to be had gratis.

ROBERT SINCLAIR, Jr.
At Sinclair & Moore's Maryland Agricultural
March 3. Repository, Light near Pratt street.

SUPERIOR CATTLE FOR SALE,

OF the Devon, and Devon & Short Horn blood, at Brookland Wood Farm, the residence of Richard Caton, ten miles from Baltimore, on the Susquehanna Rail Road, and on the Falls Turnpike Road, consisting of

Devon Bulls, Heifers and Calves, of all ages of each denomination, from 8 months to 4 years—price, forty to one hundred dollars each, according to age and quality.

Devon and Durham Bulls, the offspring of Devon Cows, by the Short Horn Durham Bull Tecumseh. It is supposed by those persons in England who have dairies of this species, that they will be found superior to all others, uniting the beauty of form, hardiness of constitution, propensity to fatten, and richness of milk appertaining to the Devon blood, and product of milk of the Durham—price, forty to one hundred dollars. Apply to

Feb. 3, 1835. THOMAS BEVAN, Manager.

GRAPE VINES.

HERBEMONT'S Madeira, one, two, and three years old, from 25 cents to 75 each.

Isabella, two and three years old, at 25 to 50 cts each.
Catawba, one year old, 25 cts. each.
White Scuppernong, two years old, at 37½ cents each.
Sultana, one year old, at 50 cts. each.
Woodson, two years old, at 37½ cents each.
Red Bland, one year old, at 25 cts. each.

Are for sale at this establishment, and will be well packed to go any distance. no. 25

THE FARMER & GARDENER

AND LIVE-STOCK BREEDER & MANAGER.

CONDUCTED BY I. IRVINE HITCHCOCK, AND ISSUED EVERY TUESDAY FROM THE AMERICAN FARMER ESTABLISHMENT, AT $5 PER ANNUM, IN ADVANCE

No. 48. **BALTIMORE, MARCH 31, 1835.** **Vol. I**

☞This publication is the *successor* of the late

AMERICAN FARMER,

(which is discontinued,) and is published at the same office, at five dollars per year, payable in advance.

☞When this is done, 50 cents worth of any kind of seeds on hand will be delivered or sent to the order of the subscriber with his receipt.

American Farmer Establishment.

BALTIMORE: TUESDAY, MARCH 31, 1835.

THE POST-OFFICE.—The following letter contains one of many similar complaints, of the non-arrival of our paper at its destination. Indeed the evil has become so great as to have caused us the loss of many valuable subscribers. We *certainly* put our paper into the post-office, with a care in the enveloping, and a regularity in regard to time, not surpassed in any publication office, and we beg our subscribers to bear the fact in mind, and to be assured that whatever irregularity may exist in the transmission of the paper, is entirely beyond our power to correct.

Alexandia, D. C., March 17, 1835.

DEAR SIR—Will you if practicable, investigate the cause of your paper arriving so irregularly through the Alexandria post-office? I have not received a paper for the last three weeks, and prior to that time they have frequently failed in coming to hand. If the fault should be discovered in your department, please correct it, and if it should be owing to any negligence in the post-office, try in future to have it obviated. Your valuable paper has been a source of great pleasure to me, but unless I receive it in future more regularly I shall with great reluctance be compelled to discontinue it.

Very respectfully,

JOHN H. BAYNE.

EARLY LETTUCE.—At the rooms of the Horticultural Society on Saturday March 7, and March 14, we observed some heads of lettuce of very superior quality. They were from the garden of Col. B. C. Howard, and are higly creditable to the skill and industry of the gardener; they were equal to any produced in the summer season, notwithstanding the extreme cold of the past winter.

There is a sheep, at a spirit dealer's in Edinburgh, who, it is affirmed, chews tobacco, takes snuff and drinks grog.—[Then it is a two legged one—no quadruped is so brutish.]

The following article, although written for the benefit of another part of the country, might be equally well turned to profit in this quarter:

[From the Boston Courier.]

PLANTING TREES.—There are few things which add more to the beauty and comfort of a country village or a large and populous city than a growth of forest or fruit trees, extending their shady branches over the streets, ornamenting the public squares or lining the public walks. A large and beautiful tree is one of the most magnificent objects in nature; and a landscape without trees presents but a barren and cheerless aspect. In many of the countries of Europe the Governments encourage the practice of planting ornamental trees. Even in Russia, the road side in many places is lined with beautiful birches, and in Germany the public highways for hundreds of miles present continuous avenues of fruit and ornamental trees, which shelter the traveller from the heat in summer, and from the cheerless north wind in winter, and add to the wealth and comfort of the inhabitants. In this country, the Elm is doubtless the most desirable tree for ornamental purposes, and it will flourish in almost every variety of soil. In passing through New England the traveller is struck with the appearance of the towering and majestic trees, and cannot but acknowledge that our fathers fulfilled the sacred duties which they owed to posterity. But every man is not a philanthropist; and many persons neglect to plant trees, lest they should never live to rest under their umbrageous boughs.—This is a selfish principle and should not be cherished. We owe a duty to others as well as to ourselves. This conduct is also based on error. The ornamental trees of America, are of rapid growth, and a person in the prime of life may reasonably anticipate the pleasure of reposing at some future day, under the boughs of a lofty Elm, whose gradual growth he had long watched with delight, and gazing with delight on the extending branches of a tree, which his own hand had planted.—In a village in a neighboring State there is an elm twelve feet in circumference; its branches shoot out beautifully in every direction to the distance of forty-five feet—and it is estimated to contain seven or eight cords of wood. It is the largest tree within a circuit of several miles. Yet this tree was planted when a sapling, by a gentleman now living—and who may reasonably expect to enjoy for years, the gratification of beholding the splendid ornament of his native town, which has thus flourished under his fostering care.

Many persons who neglect to plant trees, fearing that in the ordinary course of nature they will never derive any benefit from such an act, labour under another error. They conceive that trees must be planted when quite young—and seem not to be aware of the important fact, that trees of a large size, a foot or more in diameter, with large spreading branches can be transplanted with facility, and at a reasonable expense. "The planter's Guide," by Sir Henry Stewart, an English work, which has been republished in this country within a few years furnishes some valuable information on this subject.

The latter part of March and the early part of April, is probably the best season for transplanting trees.—This should not be forgotten. Opportunity should be seized by the forelock—and those gentlemen who are now erecting villas in East Boston, on a promontory, which is at present not embellished with a single tree, have an excellent opportunity to test the truth of our suggestions. If the system of transplanting *large trees* which has been practised in Europe for centuries, could be introduced into this country, and we believe there is nothing to prevent it—it would give comfort to individuals, during the heat of summer, add to the beauty of our cities and villages, and enhance the value of landed property.

Frost at St. Augustine.—A gentleman who left St. Augustine on the 4th instant, states that in the early part of February all the country exhibited the bloom of spring and the fruits of the summer. The orange trees were covered with blossoms and with oranges. But the cold which was so severe here on the first days of March, extended to St. Augustine, and destroyed every thing. The fruits and flowers were destroyed, and it was feared the trees also were ruined. The country appeared as desolate as if a fire had swept over it.

Mr. John Miller, of Anne Arundel county, Md., has invented a new plan for constructing bridges, called the "continuous wrought-iron bar bridge."

A starch merchant lately died in England, leaving a fortune of a million to each of his six children. The secret of his gains consisted in feeding some three or four thousand hogs yearly upon the refuse of his manufactory, which is generally thrown away for its offensiveness, but which consists chiefly of the gluten or most nutritious portion of vegetable matter.

Geology—A paragraph in the French journals, though not sufficiently explicit to admit of our full understanding of the case, appears to describe a matter of considerable geographical interest—namely, the discovery in a sand pit, near Chateaudun, of a petrefaction resembling the top of a palmtree, apout 8½ feet in length, and 1½ in girth at the base, whence it gradually tapers to the other end—altogether resembling a club. The wood is almost as sonorous as bell-metal; and in the same pit are found petrified bones of animals, and shells, belonging, it is said, both to river and sea formations.

THE FARMER.

[From the Intelligencer and Expositor.]

Improvement of soil.

It would be extremely difficult to suggest a greater earthly good to mankind, than the discovery of some plan of inducing them to *believe practically* in truths, the plainness, or certainty of which, they will not attempt to deny. The difficulty of effecting this object, produced amongst the ancients, I presume, the theory of *two souls*, amongst the moderns, a strong argument in favor of an *unseen spirit*, impelling the rational man, when acting irrationally, and I suppose gave rise to the expression of a "devilish fool."

In this class must certainly be comprehended those, to whom a self evident truth is proposed, for their benefit, and on which they refuse to act, perfectly satisfied of its being a truth, and that it would be for their benefit, if pursued, simply, because they have been *accustomed* to a different course.

The following extract from an address of a distinguished farmer, one who "*holds the plough*," and who by a judicious manuring, or improving system, has augmented the pecuniary value of a landed property, at least *ten fold*, in the same number of years, is so much to the purpose, and so applicable to the subject of these papers, that I cannot forbear giving it. It presents one of those happy pictures of a most interesting truth, that we know it as soon as seen, and the mind, involuntarily recognizes it, as self-evident.

"As the *farm*, and the *animals*, and the *implements* thereon, constitute the stock in business, of the agriculturist; their gradual improvement, is a gradual augmentation of his capital, and consequently of his wealth; but on the other hand, their gradual deterioration, is a gradual diminution of his capital, that consequently must, in process of time, inevitably terminate in abject poverty. The necessary result then of the one course of proceeding is competency, and happiness, and that of the other, insolvency and wretchedness. This being the alternative, the interesting desideratum is, how the one is to be attained, and how the other is to be avoided. The answer is at hand, —adopt the *improving system*; it is that of the most thriving agriculturist."

In the prosecution of a judicious accumulation of *compost manure*, the planter will find that all WEEDS, will aid in the work, whether in the green or dry state, and in appropriating which to this purpose, he will rid himself of, and make a profitable use of what would otherwise become his pests, and the destruction of his fences.

In this part of the work the child and the partial cripple, can be employed, and it can be going on throughout the year. No waggon, or cart need come home empty. Feeble indeed must be the being that cannot rake *leaves*, or the one that cannot gather *weeds*.

To some suggestions in my last paper, I know it will be said, why not suffer certain vegetable matter to *rot on the ground?* My former papers must have furnished an answer to the query, and to which I will add, that, suffering vegetable matter to *rot on the ground*, is something like "cow-penning," as it is usually done—when you look for the *remains* of these vegetable substances in the *spring*, you find a prodigious small portion; a judicious economy would say, cast them, as soon as it can be done, to your dungstead.

After the deposit of leaves is made, and sufficiently secured in their place, from winds, &c. by a layer of vines, weeds, &c., the *cattle* will be turned in—common sense will determine when the surface has received what would be called, a coat of cow manure, on which the contents of the *Horse* and *Mules* stables, will be spread over the surface, with also all that can be procured from the pens of the other animals of the farm. In the plan suggested for a dungstead, in a former paper, this will be readily done, without loss of time, or requiring much trouble.

Swamp Mud now claims its place, if to be procured with any degree of convenience. A New England farmer states (and my readers will rest assured, those New Englanders, in all matters of "profit and loss," know what they are about) that he used much *swamp mud*, and found the produce in *corn*, superior to the barn yard manure.—A neighbor of his used it, and found it the first year, equal, and continuing longer its good effects. Another for corn in the drill, with hog manure, alternately, the muck manure superior. Mr. Daniel Bloomer put fifty loads on *two* acres—two acres not manured—the first produced one hundred and twenty bushels—the second sixty bushels. The following spring the muck manure produced more than *twice* the quantity of oats.

In our *state*, and *climate*, and with our mud, I can bear ample testimony to its good effects, when *saturated* with the liquid post of a dung heap. In this way I have fairly, and fully determined, that it cannot be excelled, as an auxiliary, in the formation of a compost manure. PLANTER.

Massachusetts society for promoting agriculture.

WILLIAM CARTER'S PREMIUMS FOR POTATOES AND BARLEY.

Fitchburg, Mass. Nov. 29, 1834.

To Benjamin Guild, Esq. Asst. Rec'g. Sec. of the Mass. Soc. for promoting Agriculture.

The undersigned proposes the following described crops of Potatoes and Barley, raised the past season, each upon one acre of land upon his farm in Fitchburg, for the Society's Premiums—and gives the following statements in relation to the same. The acre of land upon which the subscriber raised the present year, five hundred and thirteen bushels of Potatoes, was green sward, having been mowed six years; it was broke up in September, 1835, harrowed and cross-ploughed again, and furrowed two and an half feet apart, and forty cart loads of good barn manure put in the drills. The planting was in the last week in May, the quantity of seed 55 bushels, two thirds of which were the common long red potato and the other third, the common blue potato. The ground was hoed twice; the first time soon after the sprouts appeared, and again, when the tops were about one foot in height. The crop was harvested in the last part of October. No particular account of the expense of cultivation has been kept, but no unusual expense, as may be seen from the above statement, was incurred.

The acre of land on which the subscriber has raised the present season fifty-five bushels of the common two rowed barley, is the same on which was raised the last year 677 bushels of potatoes, for which he was awarded the Society's Premium. Forty loads of good barn manure were last year, previous to the planting, spread upon the land.—Nothing was done with the land, after the crop of last year was taken off, until the last spring, when the ground was ploughed early, some time afterward cross-ploughed, and four and an half bushels of seed sown on the furrow and harrowed in. The crop was harvested in the latter part of July, and threshed and measured the last of October. No expense above what is above stated was incurred upon the cultivation of this crop.

WILLIAM CARTER.

MR. J. GARDNER'S PREMIUM CROP OF RYE.

To the Committee of Agricultural products, Mass. Agricultural Society.

The subscriber offers for the premium of the Society, for the greatest crop of rye raised on an acre, the following production of one acre and fifteen rods of land on his farm in Swanzey, county of Bristol. The lot of land on which the crop of rye was raised, the present year, was the last year planted with potatoes, and but a small quantity of manure, say six or eight cart loads of common compost manure, was put into the hills, which together with about 25 or 30 barrels of Menhaden fish, which were spread or put upon the lot, during the time of hoeing, was all the manure used for the two crops of potatoes and rye; about 225 bushels of potatoes, dug and marketed in August, was the product of that crop. Soon after the field was cleared of the potatoes, the ground was ploughed, and seed sown, and harrowed in, and completed about the first of September. The crop of rye the present year was extraordinary heavy, so that the reaping which was done early in July, required the labor, equal to that of one man for five days. The very great quantity of straw, (rather too much seed having been sown, say one and a half bushels) and upon that, but a few days before the reaping, a very heavy rain fell, made the labor of reaping quite a task; after reaping, the straw being green, some days elapsed before the binding and stacking was done, so that a waste of some, perhaps bushels of rye was the consequence. The threshing done as soon as convenient, say last of August, and the grain was thoroughly cleaned, forty-seven bushels of heavy rye, averaging 60 pounds to the bushel was measured up.

By adopting the legal standard, of 54 pounds for a bushel, the number of bushels is increased to more than fifty-two, and following out that standard of 54 pounds for a bushel, within a fraction of 48 bushels will be the product per acre, or taking the crop as it measured, weighing sixty pounds' the product amounts to forty-three bushels to the acre.

The subscriber will here add, for the information of the committee, that in this town large quantities of Menhaden fish are caught annually and mostly used for manure; the price of these fish ranges from 12 to 25 cents per barrel, and as a manure for rye are worthy of every farmer's attention who can obtain them at those prices; they

also are in high reputation for a manure generally. The subscriber owning a seine, takes several thousand barrels annually, and sells a great proportion of what he takes, but uses quite a quantity on his own farm, and the field on which the rye was raised as well as the rest of his farm has been made to be in his opinion quite productive in consequence of their being used.

The subscriber has given, as he believes, all the facts required by the committee to enable them to decide upon the claims for premiums; should the committee however require further information, in order for them to decide, the subscriber will be ready to communicate, whatever may be desirable or requisite for the committee to possess.

The expenses of the crop are estimated as follows, to wit,

One and a half bushels seed rye	80 cts.	$1 20
Ploughing and harrowing, &c.		2 50
Reaping and binding		8 00
Threshing and cleaning		6 00
		$17 70

And the value of the rye as follows, to wit:

47 bushels rye	80 cts.	$37 60
3 tons Rye Straw	$4	12 00
		$49 60

JOB GARDNER.

Swanzey, Nov., 1834.

[From the Cultivator.]

AGRICULTURAL REPORT FOR 1834.

Although the quantity of *wheat* raised in this state is annually increasing, from our becoming rather better acquainted with the plant, and a denser population and consequently new grounds coming under the use of the plough, still the crop, considered as a whole, and allowing a pro rata calculation for the causes of its increase, is not as great this year as it was in 1833. The winter of 1833-34 was what is called an open one. A good deal of wheat was frozen out in the course of it, from the want of snow, which is essential to a good winter crop. The spring of 1834 was favorable to its growth, but in the early part of the summer the weather was extremely hot and dry. The thermometer for some weeks in July ranging at near 90 degrees, and no rain to moisten or cool the atmosphere. This weather was not injurious to wheat in particular localities, but in other parts of the state the wheat suffered from blight, rust, and in a few of the midland counties, from the depredations of the grain worm, supposed to be the *Vibria Triciti*. This grub made its appearance in June, was most troublesome in a few counties north of Albany, where it committed great ravages, and from whence it will probably spread to contiguous counties the succeeding season. The earliest indication of its appearance hereafter ought to be carefully noted, and its method of propagation and propensities closely observed, in the hope that it will lead to the adoption of a plan for its extinction. Generally speaking the crop was of less weight too than the last year, and would hardly average 60 lb. to the bushel, which is less than the weight ordinarily of our wheat. The price too has been at least 15 per cent. less than the last year. We presume this was imputable to rather a lessened demand for many of our productions.

Wool.—The quantity grown in this state is annually and rapidly increasing, and the quality improving. Farmers generally are becoming better judges of both the animal and its fleece, and raise more of the valuable kinds. The native sheep has been much improved upon by intermixture with the foreign varieties, and we bid fair by a careful attention to this branch of agriculture, considering our facilities for its prosecution, to rival the English in the quality and weight of carcass, whilst we compete with Saxony and Spain in the fineness of the fleece. Perseverance will in a short time effect this, for the American wool is now preferred by our own manufacturers to a rather finer quality of foreign, because it works up better. The home market being supplied, the prospect is, we will soon see the time when it will be sought after from abroad. The price was about the same as last year, if any thing rather better; the supply on hand now in the country is not large, and will probably be very nearly consumed by the manufacturers this winter and the coming spring. The importation the last season has been small, and the prospect of the price for the crop of 1835 as flattering as the one just disposed of. The last public sales previous to the suspension of navigation by winter, (and which are a criterion not only of the quantity in market but the prospect of what the price is likely to be for months to come,) was quite as good as former sales, and if any thing rather in advance. The price of the article in Europe remains much the same as it has been for some months previous, although there were reports to the contrary. The manufacturers of woollens in Europe have constant employment and a brisk demand for their purchases.

Indian Corn.—In this article for the last year, there has been a great falling off in the quantity. The prospect for a crop was never more flattering than it was in the month of June last, when the coolness of the preceding spring had abated and the warm weather set in, but early in July the drought commenced which continued nearly three months. The corn suffered very much from it. The crop taken as a whole was not over half a yield, but the quality is good, and none was lost for want of ripening. Although this crop is small, the price is not advanced beyond the previous year. Corn is more extensively cultivated than formerly, and in ordinary seasons, more is raised off of an equal quantity of land. It delights in a warm rich soil—clayey lands are not congenial to its growth without they are well manured, and we have a wet but warm season. Under such circumstances they will produce heavy crops, but it requires a late fall (that is, late frost) to ripen it. In suitable situations it is a profitable crop, not only to wheat, for it yields not only heavy crops of grain, but large quantities of the best of provender for a winter supply for stock, at the same time that it materially adds to our supply of manure. It is more extensively cultivated in the southern and middle than in the wertern portions of our state.

Oats are our next best crop. As they are extensively cultivated, the supply in a measure supercedes the demand for corn. They do well on lighter land. The spring and summer were both favorable to their growth, and they probably suffered less from the drought than any other kind of grain. This crop taken as a whole, was rather more than an average, and their growth seems to be congenial to all situations and soil. Upon the highest hills and lowest vallies, upon the lightest sands or heaviest clays, they make the best of circumstances, and thrive in all places—but from their greedy nature they exhaust the soil, and for that reason ought not to be extensively cultivated. The prices about the same as last year. Stock will eat this straw next in avidity to that of corn.

The increasing demand for *Barley* for some years, has rendered its culture of the most importance in many of our agricultural districts, particularly in towns near and contiguous to the Mohawk, and even farther west; and it gives us pleas sure to say, that the crop has been good—better than medium, and the quality fair—though prices probably from the abundance of the crop, have not sustained their usual grade.

Hops have yielded too a fair crop, though we are sorry to say, the quality as usual, has been bad. The growers have suffered greatly in their prices in consequence of either the premature gathering of the crop, or of its having been injudiciously cured. But few good samples, we are told by buyers, have been offered in market; but these have brought a good price.

Potatoes were a light crop—not more than ½ of an average yield. It was entirely imputable to the dry weather, and they are an article now both high in price and in great demand. The kinds of potatoes generally cultivated are bad in quality and not over large in product. In both they are susceptible of great improvement, and it is against the farmer's interest that they do not receive it.

Pork has not been as cheaply fattened nor as much sought after as last year. The want of apples this year has been a serious loss to this interest, and the consequence was that to fit our hogs for market drew too much on our grain crib, which has made the fattening of the animal extremely unprofitable. The price too, from there being much old pork left in market of last year, was a falling off.

Apples and fruit there were none.

Upon the whole the year has not been as extensively prosperous to the farmer as the preceding one. The dry weather beginning in July has not ended even now, and winter has commenced with the fountains almost dried up and the streams of water low. But farmers will never despond, throwing themselves upon the bounties of Providence and their own industry. The spring of 1835 will see them recommence their labors with redoubled activity and zeal, as they act upon the motto that if they cannot "command success they will at least try to deserve it."

A new species of potatoe has been introduced in the province of Ardeche, France. One small root of half an ounce produced 48 pounds; and two bulbs in two years six cart loads!

An honest employment is a most excellent patrimony.

A clear conscience fears no accusation.

THE BREEDER & MANAGER.

Early Lambs.—Good farmers will take care of their early Lambs. Ewes from which lambs are soon expected should be housed if possible, and well fed. There is little danger of losing a lamb after it reaches the age of four days; if the dam affords plenty of milk, it will bear cold and exposure nearly as well as the mother. Early lambs afford the greatest profit in market; not only so, but early lambs make the strongest and largest and most profitable sheep. Nearly the same may be said of cows and early calves, as to housing, feeding, &c., as of sheep. The writers in the New England Farmer and other papers devoted to agricultural subjects often repeat it as a truism that the introduction of foreign breeds of cattle and sheep among careless, improvident farmers, is useless. The old American breeds can be starved as cheaply as foreign breeds, besides, they do not cost so much in the first instance and of course the heedless farmer can make experiments on them at a cheaper rate. The writers highly approbate the attempts to improve the breeds of cattle; but contend that a large share of our farmers need improvement in their habits of taking care of cattle, before our flocks generally will exhibit any thing very promising.—*Columbian Register.*

[From the London Lancet.]

DR. YOUATT'S VETERINARY MEDICINE.

Lecture XII.—*Continued.*

Ozena in Cattle.—Of *Ozena* in cattle I have seen but few cases, and they seem to belong to that periodical coryza---a nasal gleet, with the cure of which nature has a great deal more to do than the veterinary surgeon.

Glanders in Cattle.—Of *Glanders* in cattle I know nothing; that which approached the nearest to it was a case of chronic coryza, that ultimately yielded to medical treatment. I do not, however, think that this point is yet fairly settled; it is a very important one, and an interesting field for research and experiment lies before you. So far as cattle and sheep is concerned, I stand before you the first public lecturer, South of the Tweed, who has condescended systematically to notice their diseases. There is an honorably splendid exception at Edinburgh; but the instructions of Mr. Dick have hitherto been, but I trust will not always be, confined to his class. Sometimes I feel oppressed by a consciousness of the disadvantageous situation in which I am placed. Well, Gentlemen, I can only give you the experience of an individual, but I may have the happiness to enlist you in that cause in which I am laboring,---the improvement of this most important and shamefully-neglected branch of our profession, the knowledge and treatment of the diseases of cattle, sheep, and every domesticated animal; and my successor---in this chair I must not call it, although I will venture to predict, that when our undervalued, degraded profession has a little more worked its way, a chair of veterinary medicine will be established here, and will never be removed while the University of London stands on its basis---my successor, I say, in this situation, will have a pleasanter and more satisfactory task to perform. Gentlemen, this is a subject for your serious investigation.

Farcy in Cattle.—I have no case of glanders, according to the hitherto-acknowledged acceptation of the term, but have cases of that which bears too strong a resemblance to *farcy.* M. Sorillon, veterinary surgeon at Absac, in the department of the Gironde in France, has placed upon record the most satisfactory account of this disease of doubtful character. In four oxen, each of which had considerable cough, a large corded absorbent could be traced from the inside of the upper part of the fore-arm to the fetlock. *Farcy buttons* were evident, not only to the touch but to the eye, through the whole extent of the corded vessel. Most of them were hard, scirrhous; but others suppurated and ulcerated. It was the first time that he had seen a disease of this kind in the ox, and he was struck with, and alarmed by, its similarity to farcy, and he adopted the measures to which he would have had recourse in a case of farcy. He applied the budding iron; the wounds healed, the cordiness of the absorbent was gradually diminished, and the cough disappeared. Two months afterwards, however, the farcy buttons and the corded absorbent were seen again. and *the cough returned at the same time.* Two were perfectly cured, and of the other two, including the one that experienced a relapse, he could gain no after-intelligence. These cases occurred in the space of about three years, and the disease was not communicated to any of the oxen that fed in the same pasture. These are suspicious cases, but we must suspend our judgment until we have accumulated more facts. If they were cases of farcy, the disease assumed a very mild character, and was unusually manageable. I am far from sure that there might not have been some diseases of the foot—foor-rot—although not of a very malignant kind; otherwise M. Sorillon would have noticed it and connected it with the supposed farcy. Cattle are occasionally subject to ulcers about the joints, and then these little buttons, or buds, are generally seen running along the course of the veins. I have seen them continue in their hard state for several months, when the farmer would not have any thing done to them, and at length they have dispersed; but, at other times, they have burst, and ulcers have been formed exceedingly difficult to heal, and the matter from which has corroded, and ulcerated the neighboring parts. When there did not appear to be any great swelling of the foot, or any ulceration, I have known the inflammation extend up the leg, and involve the whole of the cellular membrane of that extremity, and even destroy the animal, by constitutional disturbance which it created. I have now in the house a plain and palpable case of that, in a deer, that died at the gardens of the Zoological Society, from pure irritative fever, occasioned by inflammation of the foot—foot-rot—and the absorbents were here corded, but not buttoned. We shall know more about these things in due time.

Coryza in Sheep—Coryza is a frequent disease in these animals, and arising usually from the same prevalent cause, undue exposure to extreme cold in the winter. Matter will be seen running from the nostrils of three-fourths of the sheep in some flocks; it will annoyingly plug up the narrow aperture of the nasal cavity, already filled by the singular development of the æthmoid and turbinated bones. The animal will be arrested at every second or third bite at the herbage, and will snort violently, or stand with his head protuded, laboring for breath. Some have said that this is contagious; we have had no proof that it is so; it spreads through the flock, but all the sheep have been exposed to the same exciting cause.

Periodical.—This will continue during the winter months. The health of the sheep seems to be little or not at all affected; it is a mere local affair; there is not even any enlargement of the submaxillary glands. Then, as in oxen, as soon as the warm breezes of the spring are felt, the discharge rapidly diminishes, and, whether we are to attribute it to the genial change of the season, or to the medical power of the first flush of grass, in the course of a week or two, not a vestige of disease remains in nine-tenths of the flock.

Fatal to some,—but the tenth part. Why that which renoyates the others produces in this tenth a faint struggle against the foe; and then they become weaker and weaker; the inflammation spreads, and affects other passages; ulcers are in the nose; every sinus is full of pus; the larynx, the trachea, the bronchial tubes, are lined by a kind of false membrane, composed of mingled mucus and pus, and underneath that is a flush of inflammation of the intensest kind, with deep and spreading ulceration; and the animal gets weaker still, and more and more emaciated, until pulmonary consumption is confirmed, and death closes the scene.

Seldom treated by the Veterinarian.—Sheep are, even by intelligent farmers, scarely deemed worthy of medical notice, and except there is some epidemic or contagious disease, and where in truth the skill of the surgeon is of little or no avail, he is rarely consulted about them. On this account it is that the veterinary surgeon has seldom condescended to give to the disease of sheep a moment's consideration, and thus all parties have suffered The veterinary surgeon has not had the credit of being competent to this branch of his profession, and the flocks of the farmer have been thinned by many a malady, for which the united labors of veterinarians would long ere this have discovered a preventive or a palliation, if not a cure. It will not be always thus. The proper extent of veterinary science begins now to be appreciated, and the schools must recognize it, and the veterinarian and the agriculturist will be equally benefitted.

Proper Treatment.—In some cases I have given with benefit the fever powder already recommended for horses and cattle, and in doses from 10 grains to a scruple of the compound. There have been fewer of the fated lot remaining, and some of them have been redeemed from the destruction that seemed to await them. If we connot, however, do much as to the medical treatment of this disease, we can do more in the way of prevention. If we cannot hasten the return of spring, we can remove the shiverers to a drier and warmer situation—we can encourage the growth of the thick and almost impervious hedge, or of the tree whose winter foliage will always afford a shelter. Agriculturists begin to be aware of the necessity of

some protection for the ewe that has just yeaned, and for the newly-dropped lamb. They have purchased their experience at a dear rate, but they have learned a lesson of wisdom and humanity.

Not Glanders.—The disease that I have been describing is called by some the *glanders* of sheep, but it has no affinity to that malady in the horse. The result of several experiments, so far as they have been carried, is that the sheep is not susceptible of glanders. I should be cautious of trying the experiment with a valuable flock, but I never yet heard of an instance of the disease being communicated by a glandered horse feeding in the same pasture with sheep. The matter of glanders has been thrust up the nostril of a sheep without bad effect, and the horse has been inoculated without ill result with the matter from the nose of a sheep laboring under bad coryza.

Not Irritation from the Larvæ of Flies.—You will be careful, gentlemen, that you do not confound this disease with another discharge, small and limpid, but accompanied by seemingly insupportable annoyance to the animal, who is snorting, and throwing himself about, and galloping in every direction. This occurs in the summer—it attacks only a few of the flock, and it is occasioned by the larvæ of the Œstrus Equi crawling up the nostril to reach their destined residence during the first form which they assume.

Of the swine I am not able to speak from experience, and I will not mislead you by hearsay reports from others.

[From the Cultivator.]

WINTERING SHEEP.

In December flocks of sheep require a little of our time and attention; if these are bestowed with subsequent ordinary care, sheep will commonly pass through the winter with trifling loss and much to our advantage. For want of attention in the commencement of winter I have seen large flocks nearly lost during its course, which might have been saved with a little previous care. But when it did occur you could not convince their owners that it was their bad management, as they had made up their minds to impute it solely to their *bad luck*. It is always the best policy for the farmer to have his sheep in good condition when they begin the winter, and then they are sure to go well through it. If however they are permitted to enter it poor and light—good provender and a regular supply of it, which is the best that can then be done, although it may save the lives of some, will not carry them prosperously through it. The foundation of our loss of sheep in winter is laid during the season of pasturing, for the experience of every farmer will teach him that only give them enough to eat during the summer, the natural effect will be that they will put on flesh; and a sheep in good condition is easily and safely wintered, whilst it is a most difficult job to carry a poor sheep safe through the winter. It is wrong to permit them to ramble over the fields later than about the first of December, because at that time there is little nutriment in the scanty herbage on which they feed, and the blades of grass had better remain on the stem to protect it during the frosts and winds of winter, and prepare it for an early and vigorous growth in the spring; besides, as the supply to the animal is small, and innutritious, there is great danger that there will be a falling off in its flesh, which it can illy spare, and which to its subsequent existence it is so necessary it should now retain. I have frequently thought that an open December, which is often wished for by the farmer to save his winter supply of hay, is more prejudicial to his sheep, when they ramble over the fields, and to his own interest, than he is generally aware of. It would certainly comport more with real economy, if he were to bring up his sheep by the 10th, or at farthest the 15th of this month, into winter quarters, even if the weather should remain warm and the ground uncovered; for if they lose flesh at this time, they cannot regain it until spring, and the mortality which sometimes costs almost entire flocks is imputable in a measure to this cause.

Sheep in winter should have sheds; the preservation of their health requires this indulgence, and nature prompts to it. Let me ask, if they have the choice, do they remain in the open air in a storm? No, they as instinctively run to their covering as a man does to his house, and if they do not require it quite as much, they appear quite as well for the shelter. For a flock of poor sheep a protection from the weather is all important. Those in good condition do not as much want it, as they have a better coat both of flesh and wool; but for them it is likewise useful, and a good farmer will not omit to give all the requisite shelter. In those countries in Europe which grow large quantities of the finest wool, they find it indispensable to the attainment of their object, that is fine wool, that their sheep are sheltered from storms both summer and winter, and they have made their arrangements accordingly, for they herd them every night and narrowly watch the indications of the weather during the day. They say that rain and snow give a hardness and coarseness to the wool which they can obviate by a sufficiency of shelter.

But to our subject: as soon as sheep are brought into the yard for winter, the different kinds of lambs, ewes and wethers should be carefully separated and kept apart. It is important that those in one yard should be as nearly of a size as practicable; for by being so, there are no strong ones among them, to drive the weaker from their provender. All will then feed alike and do well. The flocks ought likewise to be as small as we can conveniently make them. It is an invariable rule that a small flock does much better than a large one, even if both, according to their number, are fed equally well. If the flocks in each yard can be reduced to between fifty and one hundred, so much the better; and it is a great desideratum to make them as few as fifty if it can in any way be effected. It is also necessary to have a separate yard for old and poor sheep, and if there are any in the flock that do not subsequently do well, they should be removed into what is commonly called the hospital. These hospital sheep, by being few in number, having a good warm shed, a sheaf of oats, or a few screenings from under the fanning mill, once a day, will soon begin to improve. I have had my hospital sheep in a better condition with this care by spring, than any other flock, and I must say that for the last three seasons my sheep were in better condition when I turned them out of my yards in the spring, than when I put them there in the beginning of winter. Sheep ought to be rather sparingly than sumptuously fed, three times a day, and out of racks, to prevent them from running over and trampling on the hay. As soon as one is seen in any of the flocks to become thin, it ought to be removed at once into the hospital, where it will be better fed. If you neglect to do this it will soon be too late, and you will suffer loss; for a sheep once reduced to a certain point cannot be recovered. It is of service to give them a feeding of straw, or pine tops if you please; for it invigorates their health and makes a change in their food. They ought all to be daily watered, and if your hay has not been salted, to have a lick of salt occasionally. The opinion that sheep do not want water is erroneous; repeated observation has convinced me that it is almost as indispensable to their welfare as their food, and the sooner farmers get rid of this notion the better for both their interests and understanding. I have tried the experiment of keeping sheep without water in conformity with this improper custom so often and thoroughly, that I have come to this conclusion that the only safe rule is the opposite one. I could repeat the several occasions when I have acted upon this plan for my own information, were it necessary, but I only add that the result in my hands was invariable, that is, my sheep grew thin, as it was, that they immediately improved when I adopted an opposite practice. With this care you will save all your sheep; or not lose more of them than you would of the same number of horses and cattle. They will have no disease among them. I have often thought of an observation, made to me by an experienced wool-grower from whom I once asked information of the diseases of sheep; he answered, "what have you to do with the diseases of sheep? Take care of them and you will have no need for remedies." This observation struck me as strange at the time, but subsequent experience has amply confirmed it. And now, what will the farmer gain by keeping his sheep well? In the first place, he will save his hay, a fat sheep will not eat so much as a poor one; he will save all his grain—sheep in good condition do not require any. In the next place, he will save all his sheep—he will have more and better lambs in the spring, besides several ounces more of wool to each sheep; and what is better than all the rest, he will in the end save himself loss and anxiety. The saving will at least be from one-eighth to one-fourth of the value of his flock, and all this by attending to a necessary work in due season. A.

Braided Rat Tails.—A few days since at Darien, N. Y. a cluster of eleven rats were found in a stable, with their tails braided together in such a manner as to forbid the idea of their ever extricating themselves.—Ten of the rats were alive; they had nearly consumed the eleventh! The ends of the tails that stuck out from a half to one inch through the braiding, had perished, while the remainder was perfectly sound.

Great Yield!—We are informed that there were raised on the plantation of John R. Davis, Esq., at the head of Pungo river, in this county, the past season, on one acre of ground which had never been cleared before, twelve barrels and a half of Corn.—*North-Carolina Whig.*

THE GARDENER.

[From the New England Farmer.]

EARLY CORN.

MR. FESSENDER—About the first of October 1833, I read in some newspaper not now recollected, a communication from the Hon. O. Fiske, M. D. of Worcester, on the article of early corn which he had for three or four years successfully raised. The importance of having seed corn which would ripen sufficiently early to escape our frosts, also to make use of the same ground for other culture, and thereby save time in the spring when nature seems to press on the duties of the farmer, induced me immediately to address the Doctor and request him to send me in the course of the ensuing winter or spring half a bushel of his best selected seed.

Early in May it arrived to hand. On the 14th same month, I had about half a peck of it, after being soaked two or three days in a saturated solution of copperas, planted on less than half an acre of inverted sward, broken up for the purpose; was manured in the holes, was hoed twice with very little hilling in either operation. It was in spindle and ear the first of July, fit for boiling about the 15th to the 20th, same month, and was harvested the middle of September; and immediately husked out, measuring forty-five bushels in the ear, being more than ninety bushels to the acre. The stalk is very small and ran seldom higher than four to five feet. The ear is small and not long, but the kernel is set very compactly on the cob; is good for boiling green, excellent in bread, and very useful for the farmer on account of its early arrival at maturity; and would have been much more productive had it been planted two and a half by three feet distant, instead of three and a half by four, and some even more distant.

I also made an experiment the last year with another kind, the spindle corn (presented to me by a friend) which has a very small but exceedingly long cob, running from nine to over fifteen inches in length, is eight rowed, of a fine bright yellow color, very productive and excellent for bread, and was harvested ripe before the frosts of last season:—and the last season it is well known, was not one of the most favorable seasons for the growth of that article.

I am very respectfully,
Your obt. serv't.
HECTOR COFFIN.

The article below, on the culture of the Jerusalem Artichoke, is well worth the attention of every planter. Perhaps there is no root planted that yields more abundantly. Its uses, too, are multifarious. As a table vegetable, simply boiled as the potato, it is by many much admired. If *parboiled*, and well mashed in a mortar, and then beaten up with flour, and made into a fritter, it greatly resembles the oyster—so that with the aid of the Jerusalem Artichoke, *one dozen oysters*, in cookery, will be made to supply the place of *one hundred*. In feeding hogs, nothing of the potato tribe is superior. We speak knowingly, when we say that the Jerusalem Artichoke is superior to any food we have ever tried, for MILCH COWS. This food increases both the quantity and quality of milk, and if mashed or boiled with a small quantity of chopped corn, will so improve cattle in three months, that they will hardly be known in appearance or produce. The culture of this valuable root is simple. If every planter will put three or four hills in each corner of his fence no other culture will be required.—*Louisiana Journal.*

JERUSALEM ARTICHOKES.

Although this vegetable is generally known in this country, still it is questionable if a full and satisfactory experiment was ever made. We make the following extract:

"I was determined to prove whether or not they could be cultivated to greater advantage than the potato, as *food for cattle*. One sack was consumed by a young calf at hand; it ate them with avidity, and improved on them. I took the other two sacks and planted them in the midst of a five acre piece of potatoes. I set them whole, without cutting, measuring correctly an eighth part of an acre; the produce was in proportion to six hundred and fifty bushels per acre. The following year, the memorable one of 1826, I planted half an acre on a piece of thin gravel, old tillage land, in its regular course of preparation for a vegetable crop after wheat: they maintained their verdure through that extraordinary dry summer, and produced one hundred and fifty bushels; but the potatoes by the side of them were completely set fast: they never formed a bulb. The year following I set an acre on part of the same kind of soil, but of better quality; it produced five hundred and seventy bushels, *without any dung.* A half an acre on the same land, with the usual quantity of dung for turnips, produced two hundred and ninety bushels (a bad compensation for eight loads of excellent dung). This present season, an acre on the same land (part of my turnip fallows) produced five hundred and seventy-six bushels; but the wet state of the soil when taken up, and being a vegetable of uneven surface, which causes the soil to adhere to it more than to a potato, renders it difficult to come at the exact quantity. From an experiment I made of washing a sack, I can safely assert, I have five hundred and thirty bushels of clean roots; while the vegetables on our flat gravels do not equal this by full fifty per cent in value, except the potato, which produced three hundred and eight bushels on the same soil. I could never raise more in favorable seasons.

"The cultivation of the artichoke is the same as of the potato, except that it requires to be set earlier—not later than March; if laid above ground all winter, it is proof against the severest frost.—When once cleaned, no weed can live in its dense shade; horses, beasts and sheep consume it with avidity; pigs prefer a potato to it in its raw state, but prefer the artichoke when boiled or steamed. It attracts the game in a most extraordinary way; they resort to its shade in autumn; it forms one of the finest covers in nature. We are so fortunate as to have but little game in our lordship; I do not recollect ever having seen even a Swedish turnip bitten by a hare or rabbit, notwithstanding they will consume the artichokes left by the men in sowing them.

"If potatoes can be profitably cultivated as food for cattle, compared with Swedish turnips, mangel wurtzel, the sugar beet, &c., which I much doubt, the artichoke is vastly superior to them.—The expenses of culture is no more; it is not liable to be injured by frost; can be taken up at pleasure; it produced at least thirty per cent more, and on poor land fully fifty per cent; *is far more nutritious*, and leaves the land perfectly clean—The only objection that can be urged against their cultivation for cattle in competition with potatoes is, that they require more care in taking them up. The frost not acting upon them so as to destroy vegetation, what are missed will, of course, grow amongst the succeeding crop, but I have found very little inconvenience in this respect."—*N. Y. Farmer.*

Calla Æthiopica.—One of these showy plants, very deservedly a favorite with the cultivators of ornamental flowers, we had the pleasure of seeing in the highest perfection, on February 20, belonging to Miss Frances Alsop, of this city.

The measurements we then made of this fine Calla, were as follows:

Height of the scape, three feet surmounted with a white cucullate spathe, or as it is commonly called, the flower, and measuring, (the circumference of its margin) two feet three and a half inches.

The glossy green sagittate leaf was seventeen inches long, by eight inches broad; the leaf was elevated on a petiole, of about the same height with the scape.

The Calla Æthiopica of Willdenow, we have just been speaking of, appears to have been first introduced into England about the year 1731, and is a native of the Cape of Good Hope. It is also said to be found on the Island of St. Helena. B.

Middletown, Conn. March 18.

SILK MACHINE.—We learn that an enterprising mechanic of this town has invented a machine for Reeling, Spinning and Twisting Silk, applicable to domestic purposes or may be worked by horse or water power. By this machine the silk is separated from the cocoon and made into silk threads of any size wanted spun, doubled and twisted, placed on quills, reel or wound into balls, by one and the same operation, ready made into twist or sewing silk, or for coloring and weaving. The space occupied by the Machine is only about 5 feet from the cocoon to the completion into silk finished.—We have the strongest assurances of its success, furnishing an apparatus which will give this country an advantage over all others in the production of the raw material.—*Northampton Cour.*

The Silk Worm and Mulberry Trees.—The possible contingency of a rupture with France will naturally turn the attention of our farmers more than it yet has been, to the cultivation of the mulberry. Many plantations of this tree exist in New England, and in some towns the silk manufactory has been carried on by individuals in a domestic way, and especially by some of our industrious Yankee girls, with great profit. During one of our late fairs in this city, a man wove from the *cocoons*, an excellent strong silk for vests. The subject also has been agitated in Congress, where Judge Spencer's report some few years since enters into the matter in detail. Many essays also have been published on the cultivation

and manufacture of silk in the United States, the whole amount of which statistical information goes conclusively to establish the fact, that our country, (especially the South,) is admirably adapted for the growth of the mulberry, and that the raising of the worms and the fabrication of silk, are of such easy and simple process, that the business may be pursued to any extent the moment we feel disposed to undertake it in good earnest. —*N. Y. Star.*

[From the New England Farmer.]

DIFFERENT SORTS OF WALNUTS.

A correspondent whom we are solicitous to oblige, wishes "to learn if there is any certain rule by which the true Shell Bark or Hickory nut tree, while young, can be distinguished from the Pig or Bitter Walnut tree. The occasion is, I have about fourteen acres of young growth of the walnut tree kind, and wish to transplant the Shell Bark kind for fruit, and do not know them apart in the grove." He wishes, therefore, for "the rule to distinguish the two kinds of trees, when young, if any rule exists."

Authors differ very widely in their description of this genus of trees. Loudon, in his Encyclopedia of Gardening, treats of but one kind—the English Walnut, of which he mentions several varieties. The Farmers' Assistant asserts, that "there are but four species of this tree in this country, which are indigenous. The enumeration of these, by M. de Witt, which is believed to be the only correct one, is as follows: The black walnut (*Juglans nigra*), the butternut (*Juglans cinerea*), the Illinois nut (*Juglans olivæ formis*), of each of which there are no varieties, and the hickory nut (*Juglans alba*), of which there are several varieties, such as the shag bark, the smooth bark, &c. The nuts of the three first mentioned, and of the shag bark, are good; some of the varieties of the smooth bark are tolerable, and some are bitter."

Michaux's Treatise on the Forest Trees of North America enumerates many more varieties of the walnut, with descriptions too long for our insertion; and such, we apprehend, as would not enable our correspondent to distinguish the different varieties in young trees of that genus. Sweet's Hortus Brittanicus very much enlarges the list, and gives us five varieties of the walnut tree, and twelve varieties of the hickory nut. But his descriptions, we fear, would furnish our friend with but little information, which could enable him to select such young walnut trees as would prove most proper and profitable for transplanting. Still, we will quote his distinctive terms, as given in English, which will serve as a sample of the infinite diversity, as well as utility, of Nature's productions.

Under the head Walnut Tree, we have the common, double fruited, black, shell bark, cathartic [butternut,] ash-leaved and wing-fruited. Then under the head Hickory nut are given, Pecan nut, narrow leaved, shell bark, shag bark, mocker nut, large fruited, pubescent, small-fruited, bitter nut, pig nut, smooth leaved, water, and entire leaved. Thus, instead of Mr. De Witt's four species of the Walnut, we have Mr. Sweet's seventeen varieties of the Juglans or walnut genus. We have, however, never seen half as many varieties; but always have supposed that the fruit and timber of that which had a rough or shaggy bark was the most valuable for cultivation, and that the roughness of the bark presented a sufficient criterion for distinguishing between those sorts that are, and are not, to be recommended for cultivation.

MISCELLANEOUS.

INTEMPERANCE.

A drunken man *freezes* to death in the streets; his companions drink to keep themselves *warm* and stagger to the grave-yard with his remains. A son dies of drunkenness, and the father skulks to the sideboard and drinks off the dregs of the dead man's bottle. One man drinks that his appetite may be sharpened and his stomach toned and braced to a fuller and healthier action, though his neighbors by a similar course is shrivelled and almost actionless. The glutton drinks before dinner to create the sensation of hunger, and he drinks after dinner to quiet the sensations of repletion. In short there is no end to such absurdities. Men will talk and argue and even stagger into eternity, singing paens to the praise and glory of drink. If gunpowder, or fire-arms, or steam engines, occasioned the lowest fractional part of the evils ardent spirits occasion, the manufacturers, and all connected with their use in any way, would be hunted from every virtuous and humane community, by the force of public indignation. Did any one solitary disease make but half the ravages ardent spirits make on life and health, the skill and genius of the medical faculty would be stretched to its utmost, and the men of prayer would crowd round the altars fast and thick as doves to their windows, and there would be terror and mourning over the land; but because it is alcohol—the dear good friend, in health and sickness, in joy and in sorrow, in warm weather, and cold weather, and all weather, men hug it to their hearts and shout after Temperance men, as Micah shouted after his idols, "ye are taking away my gods, and what is this ye do unto me, what aileth thee Micah?"—*McKee's Press at Pat. N. J.*

BURDEN'S PATENT HORSE SHOE.—We became accidentally in possession of a horse shoe manufactured at the Troy Iron and Nail Factory, by a machine lately invented by Mr. Burden, which in addition to the rich reward the inventor cannot fail to realise, is conferring a lasting benefit on the country. These shoes will be put up in casks of assorted sizes, (similar to nails) and sold at a price but little above that of horse shoe iron in bar—thus saving the laborious process of pounding them out with the hammer, as has been done from time immemorial. Probably a greater curiosity is not to be seen than to witness the number of useful inventions introduced by Mr. B. within the last thirteen years, and which are now in operation at the Troy Establishment.

We truly condoled with Mr. B. in the recent loss of his steam boat, at a moment when he was about to realise his expectations; but on the whole we think he has no cause to regret his success in the mechanic arts, as we are creditably informed that in every attempt to improve he has succeeded to the utmost of his wishes, which is seldom the lot of an inventor—and we do not hesitate to predict that his plan of steam boat will yet succeed to his most sanguine expectations, being founded on principles which to us appear to be as immutable as the fixed laws of nature.

We are happy to learn that a gentleman is now in the city for the purpose of ordering two engines for a boat at present building at Troy, on Mr. B's plan, intended to ply on the Farmington, Hampden and Hampshire canal, which (so far as the size goes) will prove the great value of the invention. We understand the boat will be in operation sometime in May next.

Mr. Burden has also, we learn, received authentic letters from Paris relative to a meeting there of scientific men on the subject of his steam boat—one constructed on his model being, as we have already stated in our paper, about to be placed on the Seine, to run between Paris and Rouen.

As to his horse shoe, one of which is in our office, the machine turns out thirty horse shoes, curved, regulated and uniform, *in one minute*, the greatest of all modern improvements.—*N. Y. Star.*

The Electrical Eel.—The electrical eel attains to a considerable size and sometimes kills a horse that is wading the streams: when he comes in contact with the chest of the horse about the region of the heart the power of his stroke knocks him down and kills him. A man, attempting to lift a small one carefully, has heen knocked down by it. It kills frogs and fish instantaneously. It is of a dull leaden colour, with small lurid eyes; it sails with as much facility backwards as forwards. The electricity is not permanent, nor the power always at its command; when hungry the power is at its greatest intensity.—*Webster's Narrative of a Voyage to the Southern Ocean.*

Transmigration of Souls.—Talking on the subject of metempsychosis, a young man observed, that he remembered having been the golden calf. "Very likely," replied a lady, "for you have lost nothing but the gilding."

To remove a hard coating or crust from glass and porcelain vessels.—It often happens that glass vessels, used as pots for flowers and other purposes, receive an unsightly deposit or crust, hard to be removed by scouring or rubbing. The best method to take it off, is to wash it with a little diluted muriatic acid. This acts upon it and loosens it very speedily.

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BALTIMORE PRODUCE MARKET.

☞ *These Prices are carefully corrected every* MONDAY.

	PER.	FROM	TO
BEANS, white field,	bushel.	2 00	2 50
CATTLE, on the hoof,	100lbs.	6 00	6 50
Slaughtered,	"	3 00	4 00
CORN, yellow,	bushel.	68	70
White,	"	68	70
COTTON, Virginia,	pound.	16	17½
North Carolina,	"	—	—
Upland,	"	17½	18½
FEATHERS,	pound.	35	37
FLAXSEED,	bushel.	1 37	1 50
FLOUR—Best white wheat family,	barrel.	6 25	6 75
Do. do. baker's	"	5 75	6 25
Do. do. Superfine,	"	5 00	5 25
Super Howard street,	"	5 00	—
" " wagon price,	"	4 87	—
City Mills, extra,	"	—	—
Do.	"	5 25	—
Susquehanna,	"	5 00	—
Rye,	"	4 00	4 50
GRASS SEEDS, red Clover,	bushel.	4 75	5 25
Timothy (herds of the north)	"	2 50	3 00
Orchard,	"	3 00	—
Tall meadow Oat,	"	2 00	2 50
Herds, or red top,	"	1 25	—
HAY, in bulk,	ton.	16 00	18 00
HEMP, country, dew rotted,	pound.	6	7
" water rotted,	"	-	8
HOGS, on the hoof,	100lb.	6 00	—
Slaughtered,	"	—	—
HOPS—first sort,	pound.	12	—
second,	"	10	—
refuse,	"	8	—
LIME,	bushel.	33	35
MUSTARD SEED, Domestic,	"	5 00	6 00
OATS,	"	33	37½
PEAS, red eye,	bushel.	—	—
Black eye,	"	87	1 00
Lady,	"	100	—
PLASTER PARIS, in the stone,	ton.	3 00	—
Ground,	barrel.	1 37	—
PALMA CHRISTA BEAN,	bushel.	2 00	—
RAGS,	pound.	3	4
RYE,	bushel.	66	—
TOBACCO, crop, common,	100 lbs	3 75	5 00
" brown and red,	"	5 00	7 00
" fine red,	"	7 00	9 00
" wrappery, suitable for segars,	"	6 00	12 00
" yellow and red,	"	8 00	12 00
" yellow,	"	9 00	12 00
" fine yellow,	"	12 00	16 00
Seconds, as in quality,	"	4 00	5 00
" ground leaf,	"	5 00	9 00
Virginia,	"	5 00	10 00
Rappahannock,	"	—	—
Kentucky,	"	6 00	9 00
WHEAT, white,	bushel.	1 18	1 23
Red,	"	1 10	1 12
WHISKEY, 1st pf. in bbls.	gallon.	32	—
" in hhds.	"	31	32
" wagon price,	"	27½	—
WAGON FREIGHTS, to Pittsburgh,	100 lbs	2 25	—
To Wheeling,	"	2 50	—
		washed.	*unwash*
WOOL, Prime & Saxon Fleeces,	pound.	52 *to* 62	26 *to* 28
Full Merino,	"	46 52	24 26
Three fourths Merino,	"	39 46	23 24
One half do.	"	35 39	23 24
Common & one fourth Meri.	"	32 34	22 24
Pulled,	"	33 35	23 26

BALTIMORE PROVISION MARKET.

	PER.	FROM.	TO.
APPLES,	barrel.	—	—
BACON, hams, new,	pound.	10	11
Shoulders,	"	8	9
Middlings,	"	8	—
BUTTER, printed, in lbs. & half lbs.	"	37	50
Roll,	"	15	25
CIDER,	barrel.	—	—
CALVES, three to six weeks old	each.	3 00	6 00
COWS, new milch,	"	17 00	30 00
Dry,	"	8 00	12 00
CORN MEAL, for family use,	100lbs.	1 50	—
CHOP RYE,	"	1 50	—
EGGS,	dozen.	15	17
FISH, Shad, salted,	barrel.	5 75	6 00
Herrings, salted, No. 1,	"	4 75	—
Mackerel, No. 1, 2 & 3,	"	5 50	6 75
Cod, salted,	cwt.	2 50	3 00
LAMBS, alive,	each.	1 25	2 00
Slaughtered,	quarter	37	50
LARD,	pound.	8	9
ONIONS,	bushel.	62	75
POULTRY, Fowls,	dozen.	1 50	2 25
Ducks,	"	—	2 50
POTATOES, Irish,	bushel.	62	75
Sweet,	"	—	—
TURNIPS,	"	75	—
VEAL, fore quarters,	pound.	3½	4
Hind do.	"	6½	—

ADVERTISEMENTS

DEVON HEIFER.

A beautiful Devon Heifer one year old—of pure blood, and good size—for Sale for $50 Cash. Application to be made to I. I. HITCHCOCK,
mh. 31. Amer. Far. Estab.

BUFFALO BERRY TREE.

SINCE it was ascertained that this tree is diœtious (the male and female being distinct trees) we have hesitated to send it when ordered, because our trees are too young yet for their sex to be developed. Under these circumstances we propose to furnish single trees (the sex being unknown) on the following terms:—Trees less than two feet in height at 50 cents each, and those above two feet at 75 cents a piece. When their sex shall have been ascertained we will furnish either male or female trees at $1,25 each, and at $2 per pair. By this arrangement time may be gained by taking young trees this spring and putting them out, relying on the future for mates for them, and nothing can be lost in point of price of them. We have a few from 1½ to 3 feet high, which we will put up to order on the terms above stated.

SINCLAIR & MOORE.
March 31, 1835.

ORNAMENTAL AND FRUIT TREES.

BARTRAM BOTANIC GARDEN.—The subscriber has for sale at his Garden and Nursery, Kingsessing, near Philadelphia, a large assortment of Fruit Trees of suitable sizes for transplanting, embracing every variety of Apples, Pears, Cherries, Plums, Apricots, Grapes, Raspberries, and Currants, together with a large assortment of Green House Plants, Ornamental Trees, Flowering Shrubs, Evergrens, Vines and Creepers, Honeysuckles, Roses, Carnations and Pinks, Herbaceous Perennial Flowering Plants, &c. &c. comprising as great an assortment as any other Garden in the United States.

Orders per mail, or left at Alderman Bartram's office, No. 126 Walnut street, will meet with prompt attention, and the articles will be delivered in Philadelphia, or forwarded to order, packed in such manner as to bear transportation in safety to any part of the United States.

ROBERT CARR.

☞ The usual annual spring public sale of Plants, including a large collection of the finest Prize Dahlias, will be held as soon as the weather will permit, of which due notice will be given in the papers. mh. 31.

BULBOUS ROOTS.

HYACINTHS, Tulips and a general assortment of Bulbous Roots, suitable for the present season, for sale low at this establishment by

Oct. 28. I. I. HITCHCOCK.

WANTED,

A GOOD JACK & JENNY, or either, for which a fair price will be paid. Address, with *minute description* as to age, color, height, size and general appearance, character as a breeder, and *price*,

I. I. HITCHCOCK,
mh 17 Amer. Far. Estab.

POINTER.

A FIRST rate Pointer Slut, of pure blood, 6 months old, for sale at this establishment. mh 17

FRUIT AND ORNAMENTAL TREES

BLOCKLEY NURSERY, near Philadelphia.—The subscriber continues to cultivate for sale at the above establishment a large assortment of fruit and ornamental Trees. It comprises upwards of 60 kinds of apples, 50 of pears, including the best Flemish Pears, 20 of cherries, 20 of Peaches and 26 of Plums, also apricots, quinces, English Gooseberrys &c. which none but the best of kinds are cultivated as regards to quality more than variety; also English Walnuts, Horse chesnut, Tulip Tree, sugar maple, Scarlet Maple, English Sycamore, Weeping Willow, Leiden's Mulberrys, English Elm, Ash, Locust, Mountain Ash, and other ornamental Trees, suitable for streets, gardens, &c.

Orders left with John Feast, Florist, Lexington street, Baltimore, or sent by mail to the care of B. E Valentine, Phila. Bank, Philadelphia, will be punctually attended to, and trees forwarded securely packed, according to directions. The packets from Philadelphia to Baltimore afford an eligible means of conveyance, and trees will be delivered on board of them, after which they will be at the risk of the purchaser. SAMUEL RHOADS.
mh 31 1t

SUPERIOR CATTLE FOR SALE,

OF the Devon, and Devon & Short Horn blood, at Brookland Wood Farm, the residence of Richard Caton, ten miles from Baltimore, on the Susquehanna Rail Road, and on the Falls Turnpike Road, consisting of

Devon Bulls, Heifers and Calves, of all ages of each denomination, from 8 months to 4 years—price, forty to one hundred dollars each, according to age and quality.

Devon and Durham Bulls, the offspring of Devon Cows, by the Short Horn Durham Bull Tecumseh. It is supposed by those persons in England who have dairies of this species, that they will be found superior to all others, uniting the beauty of form, hardiness of constitution, propensity to fatten, and richness of milk appertaining to the Devon blood, and product of milk of the Durham—price, forty to one hundred dollars. Apply to

Feb. 3, 1835. THOMAS BEVAN, Manager.

AGRICULTURAL IMPLEMENTS, GRASS SEEDS, &c.

SINCLAIR & MOORE offer for sale at the Maryland Agricultural Repository, Light street, near Pratt street wharf, a general assortment of PLOUGHS of the most approved kinds, adapted to the different kinds of lands and various purposes of the farmer.

Among them are the self-sharpening Plough, which has the advantage of a moveable steel point from 15 to 24 inches long, which can be reversed, as a bevel is formed by wearing, and advanced as it becomes shorter, so as to bring into actual wear from 12 to 18 inches of solid wrought bar—of assorted sizes, from the small seed plough to large three horse.

Wood's patent Plough, of assorted sizes, with cast shares
Sinclair & Moore's improved do do do do
McCormick's improved do do wrought shares
Barshear, from 1 horse to heavy 3 horse, do do
Cary Plough, having the shape of the old well known Cary, but has a cast mould board and wrought share —2 sizes
Buffalo Plough, a well formed mould board for stiff lands, with cast shares
Double and single shovel Ploughs. ALSO,
Cultivators, with wrought and cast tires
Do do made to expand
Harrows of different sizes and forms
Wheat Fans, from 15 to $35
Corn Shellers of the best patterns
Cylindrical Straw Cutters, 20 inch box, adapted to horse or water power, capable of cutting 75 to 100 bushels per hour, price $75
14 inch box hand power, 45
11 inch do do do 27

And a general assortment of small articles—such as Hay and Manure Forks: Spades; Shovels; Mattocks; Picks; Hoes; Trace Chains; Hames; Straw Knives.—Also, Thompson's superior cast steel Axes, and other Tools, wove Wire for fans, screens, cellar windows, &c.

FIELD SEEDS—Clover, timothy, herds, orchard grass, tall meadow oat grass seed, and millet seed at lowest market prices—150 bushels prime seed oats.
March 10.

THE FARMER & GARDENER

AND LIVE-STOCK BREEDER & MANAGER.

CONDUCTED BY I. IRVINE HITCHCOCK, AND ISSUED EVERY TUESDAY FROM THE AMERICAN FARMER ESTABLISHMENT, AT $5 PER ANNUM, IN ADVANCE

No. 49. **BALTIMORE, APRIL 6, 1835.** **Vol. I**

☞THIS publication is the *successor* of the late

AMERICAN FARMER,

(which is discontinued,) and is published at the same office, at five dollars per year, payable in advance.

☞When this is done, 50 cents worth of any kind of seeds on hand will be delivered or sent to the order of the subscriber with his receipt.

American Farmer Establishment.

BALTIMORE: TUESDAY, APRIL 6, 1835.

TO CORRESPONDENTS.—*Agricola's* excellent article (on the culture of Corn) is received, but the one which he says should precede it has not come to hand. When it shall, we shall most gladly lay both before our readers.

To our new and *unknown* correspondent *Thornton*, whose introductory we give in this number, we tender a cordial welcome, and assure him we shall await with solicitude further contributions from him. He expresses our own sentiments in regard to the further discussion of agricultural subjects through periodicals, although involving questions and opinions that may have been before discussed without being settled or determined We therefore hope he will express his opinions fully and freely on every subject interesting to the agricultural community.

EFFECTS OF THE WINTER—General Frost has, during his last campaign, pushed hostilities pretty vigorously against the vegetable kingdom, and the killed and wounded are probably more numerous than usual. Except in well sheltered locations, the buds of the peach tree are effectually nipped, and in very exposed situations many of the trees themselves are killed. It has indeed been a trying winter to all vegetables. The more delicate varieties of vines are killed to the ground, and some of them root and branch. We hear great apprehension expressed by some of the farmers for the welfare of their winter grain; but we are used to seeing them annually more frightened than hurt, and we advise them to be cautious of giving up the ship too readily. Many instances have come to our knowledge in years past of good crops being reaped from fields which at this time of year, and even some weeks later, gave little or no promise of such a result.

But while we have found among the slain some productions that have been generally deemed hardy, we have been gratified in perceiving that our favorite *Morus Multicaulis*, which has been as much exposed as any of our plants and trees standing unsheltered in the open garden, is untouched by his icy highness, and is now pushing its buds from the very extremity of its tender branches of last fall's growth. Whilst we believed that this tree was sufficiently hardy to stand ordinary winters with the loss perhaps occasionally of some of the tenderest of the *young* wood, we were prepared to see that it had *this* winter suffered severely, and our pleasure was proportionally enhanced on finding as above mentioned that it had passed the frigid ordeal unscathed.

Probably fruit of the more delicate kinds will be scarce next summer—but we are not so desponding on this point as many of our acquaintances, and still less so in regard to grain and other agricultural crops.

HORTICULTURAL SOCIETY OF MARYLAND.

The Council of this Society at its last meeting decided on holding its next annual exhibition on 27th, 28th & 29th May next, and appointed a committee of arrangement to carry this resolution into effect, whose names are a guarantee that the thing will be done as heretofore—*well*. This Society has already effected important benefits by making it the interest of our gardeners to produce *the best* of every thing in the several departments of their establishments—culinary vegetables, fruits and flowers. Its usefulness however must depend principally upon the degree of countenance and encouragement which the public shall extend to it, increasing its funds by new memberships and by attending its exhibitions. It ought to be borne in mind that this Society is not confined to Baltimore—it is emphatically a *state* institution, and it will welcome most cordially to membership, not professed gardeners only, but both ladies and gentlemen from all parts of Maryland and the District of Columbia on this side the Potomac. The subscription for the first year is $5, and subsequently only $3 per annum. Copies of the Constitution and By-Laws and list of members, may always be had at this office, and from the corresponding Secretary, G. B. Smith, Esq., at the office of the Turf Register.

Come, farmers of Maryland, and join us with your wives and daughters—you will never regret it.

MARYLAND HORTICULTURAL SOCIETY.

At a meeting of the Council of the Maryland Horticultural Society, Saturday, March 28th, the following proceedings were had, viz:

Mr. Edward Kurtz exhibited a new and valuable Camellia Japonica, raised by himself, from seed, and now in bloom for the first time. The seed was from the old Waratah. Its form is that of the Anemone flower'd or Waratah; the outer large petals, of a fine clear carmine, beautifully veined with a deeper tint of the same color and cordate; the centre petals white, with occasional sulphur tinges, and beautifully pencilled with deep bright pink—many of them edged with yellow.—It is entirely distinct from any other variety that has yet appeared amongst us, and considered an addition to our ornamental collections sufficiently important to authorize special notice and distinction. Therefore,

Resolved, That it be named by the Society *Camellia Japonica Waratah Kurtzii*—that a correct drawing be obtained of the flower, at the expense of the Society, and, together with a full description of the flower, be forwarded to the publisher of some Horticultural work, who may be willing to publish a colored lithograph of it.

Ordered, That the next annual Exhibition be held on the 27th, 28th and 29th May next, and that Messrs. Edmondson, Kurtz, S. Feast, John Feast, Dr. Cohen, E. Thomas and Ch. E. Wethered be appointed a Committee to make the necessary arrangements.

Resolved, That a Committee be appointed to make arrangements for publishing the proceedings and notices of the Society in the different papers, and that Joseph King, Jr. and Dr. Cohen compose the said Committee.

PLANTS EXHIBIED.

By Mr. Samuel Feast.—Rododendron orberun hybridum. (This is a new and most splendid variety, produced from seed in Scotland and sent to this country before it had shown flower, and now in blooming for the first time here. The head is thickly set with large flowers, of a deep carmine, very clear and lively. It is considered a great acquisition.) Azalea Indica Hybrida. (This also a new variety. It differs from the Cærulea in the shape of the flower, which is of a better form, the two upper petals being longer; it is also more spangled; but the chief and most important difference consists in the number of flowers in the head, which in this is from 5 to 9, while in the Cærulea there are generally but one to three.—The color of the Hybrida is a rich pink, slightly tinged with blue.) Mr. Feast also exhibited 27 varieties of Auriculy, Genista, Canariensis, Coronilla Glanca, Hakea, Saligna, Pittosporum, Undulata, Accacia Angustifolia, and Virticilata, Erica Virticilata, Verbena Melendris, Oxalis Nova, &c. &c.

GIDEON B. SMITH, Cor. Sec'y.

THE FARMER.

STATE OF AGRICULTURAL KNOWLEDGE.

St. Johns, March, 27th 1835.

To the Editor of the Farmer and Gardener:—

Dear Sir—I have been a reader of "The American Farmer" since it has been under your controul particularly, and cheerfully bear my testimony to the intelligence with which it has been conducted, and the ability of its contributors. I have been a subscriber to the Farmer and Gardener since its commencement, and feel a deep anxiety that it should prolong its existence, and preserve its interest as the offspring of its venerable sire, which stands like the aged and expansive oak still overlooking the numerous scions that are springing up in rivalry around it I wish you had called your new series "The Farmer," it is fully entitled to such distinctive appellation, and the addition of "and Gardener," smells something of the ginger bread; like the oaths of Hotspur's wife. But I have no single title to prescribe to you, and I do not write to complain, but to ask leave to become one of your contributors as far as my poor capacity and knowledge may be acceptable. I need not speak of the diffidence with which I make the request, and were I to look alone to my circumscribed reading and very limited practical experience, I should certainly be deterred from entertaining the design of occasionally addressing you. But sir, I look upon the "Farmer" as exercising a kind of paternity over the cultivators of the country, and that consequently we whom you foster and instruct, are bound to aid you to the best of our ability, fully satisfied that you will appreciate the motive of our efforts, if you cannot applaud their performance.

I might, sir, with much greater propriety than many of your contributors, apologize for my intrusion upon the patience of yourself and your readers, by alleging how little I know of agriculture either from books or practice, and of consequence how little I have to communicate. But if your subscribers were all to permit such apprehensions to deter them from the obvious duty of mutual instruction, how many excellent, interesting essays which have enriched your paper, and instructed your readers, would have been suppressed, and how many details of practical experience would have been lost which are now treasured up and preserved. Every one who communicates his knowledge to us through your paper may take it for granted, either that some one finds novelty and instruction in what he has disclosed, or additional evidence to confirm his practice, or shake his opinion and point him to a better—no one, therefore, I conceive, should shrink from giving his knowledge, suggesting his views, or disclosing his practice, from the fear, that what he says, has been said before, or that some one may know more than he on the subject, for he may take it for granted, that every fact and mode of culture, every result of experience, is important to him who seeks for truth. For if we know an experiment has been made a dozen of times successfully, still we would like to know it has been successful or disastrous again as more conclusive of its benefits or inutility.

The science of agriculture, aged as it looks, is but yet in its infancy. In no department of knowledge, is there so little known and so much to learn; so much dependant upon experience, and so few well conducted experiments; such a vast variety of operating causes, so few of them accurately considered. When one reads the ablest writers, we find them discordant upon the very principles of the science, the most essential to its comprehension. There is hardly a plant cultivated, but its virtues are denied and affirmed with equal assurance—there is not one mode of culture that is not insisted upon and reprobated with correspondent pertinacity. Men who have learned all they know of agriculture from books, and men who have united extensive reading with long and careful practice, as well as those who have derived their knowledge exclusively from what they have done themselves, and who despise what they contemptuously call book farming, agree upon no one mode of culture, of any one article, or upon the virtues of one single thing they grow. The most familiar operations of husbandry, the most common plants, are the subjects of the most discordant opinions—innumerable instances of this discrepance might be cited, not only amongst authors, but among men who never read any thing—take for instance, the utility or inutility of fallows, which one would have supposed had been settled by the Georgics of Virgil and the husbandry of Columella. We find that the Greeks fallowed, and that the Romans, not only pursued it sedulously themselves, but were the means of introducing it as indispensable over all Europe. In Britain its virtues were undisputed till the middle of the last century, when Young and Kent, and others got up a fair anti-fallowing mania, which as Loudon (Enc. Ag. 801) says "has now spent "its force, and after exhausting all the arguments "on both sides, the practice does not seem to give "way, but rather extend." Sir Humphrey Davy is against it; his able commentator more decidedly for it—the Cyclopedia says, "fallows may almost be dispensed with, by a proper rotation of crops." Loudon (Enc. Ag. §2176) informs us that "Agricultural experience has fully proved that fal-"lows are the *only* means by which stiff clay in "moist climates can be effectually cured of weeds." Jonathan Roberts, (Chester county Ag. address, 5 Am. Farmer, 306) gives it as his opinion that "In the course of 25 years experience I have "found summer fallowing a bad course of hus-"bandry." John H. Cock, (4 Am. Far.) is on the contrary, decidedly of opinion that "summer fallows and clover husbandry are inseparable," whilst Tho. Emory of Queen Anne, (4 Am. Far. 155) on the other hand insists that "of the many "errors which prevent good farming, naked fallow-"ing many years of observation have induced me "to rank among the foremost." If any one could entertain any doubt of the discordance of these opinions or of the ability of the gentlemen who so distinctly differ, I could cite, as the lawyers say, many more of the same class of cases.

As an instance of the conflict of opinion and the unsettled practice respecting the commonest vegetable, let us turn our eyes to the views of cultivators respecting that luxury of the rich, and necessary of the poor, the potato, which is raised and eaten by almost every people upon earth.

Gerarde tells us to eat them as "a delicate dish, and not as common food," and Parkinson recommends them 'with sack and sugar', 'and baked with marrow and spices.' Dr. Tissot insists upon their weakening (when freely used) the intellectual powers; while the swarming population of Ireland displays a practical refutation of his absurdity.—Jonathan Roberts and hundreds of others, less knowing and shrewd, tell us that (5 Am. Far. 307) "the potato is an uncertain crop," whilst to the sons of Erin, "the crest of O'Shachuashanc" is the surest and most productive, and most essential crop they can put into the ground. Here's a writer in one of your latest numbers tells us of his raising 1800 or 3000 bushels per acre, (taking good care not to tell any body how he managed) whilst General Washington's letters to Arthur Young (page 28) considers 175 bushels a pretty decent crop—one writer recommends planting the eyes only, another to cut the sets very small, and one Brown says, half an eye would have shown any the absurdity of such process. Mr. Knight (the Prest. of the Hort. Soc. of London too) details his striking success in planting whole potatoes of the largest size, and Mr. Drummond in Scotland (Quart. Jour. Ag. vol. iv. p. 411) and professor Lindlay entirely, and they say successfully refute his theory and condemn his practice.

I need not, sir, render my paper still more tedious than it is, by extending these endless variety of difference and distinctions asserted or fancied amongst agriculturists. Some other day may be I may annoy or amuse your readers by a more extended and particular concordance of the doctrines of husbandmen. At present I shall only further say that when I commenced my brief career in tilling the earth, I was simple enough to believe that there was but one course pursued by the judicious farmers of my section of country, and that all I had to do, was to ascertain it. But when I came to enquire of those who were reputed proficients in raising crops, I found each one to have a course handed down to him by his immediate ancestor, without knowing whether it were the best, or whether a very different one might not answer just as well; and I found little or no uniformity of opinion upon the most ordinary process, and no one who could give any reason for the faith that was in him—I consulted, as I intended to do any how, the few works upon the subject of my enquiry, which were within my reach, with great pleasure to be sure, but with very little more success in discovering any satisfactory concurrence of opinion.

Thus, Mr. Editor, if after all that has been done and written upon the subject of husbandry, from the day that the thorns and thistles sprung up in such annoying luxuriance around the heart-broken progenitor of the human race, there is so little that is effectually established either in the principles or practice of agriculture, so few positive, visible and notorious consentible lines agreed upon, why should I even, or any of your numerous and excellent contributors feel so squeamish about trusting ourselves upon paper, in detailing the experiments we have made, or the ordinary course of our operations. So far from our being so, I think we ought to lay aside coyness that trammels us, and step forward frankly to do all we can to instruct one another. We farmers are (or ought to be if we ain't) a straight forward unpre-

tending sort of folks, and if any of us can't write any better than he ought, he will be cheerfully excused. What we chiefly want is facts—half a bushel of truth is worth a barrel of speculation any time, and it don't require any skill to speak out the thing as it is. Entertaining these views, I have been emboldened to enter myself among the contributors to your valuable paper. If my lucubrations are worth a corner, give it to them; if they are not, you will please to slip them quietly where I have slipped an hundred better myself without any regret—into the fire.

Yours, &c.

THORNTON.

ON PLOUGHING.

As the season is near for using that invaluable instrument, the plough, perhaps it may be well to call the attention of our readers to the subject.—There seems to exist quite a diversity of opinion in regard to the proper depth that land should be ploughed. Many, and in our opinion too many, advocate shallow ploughing. 'What's the use,' say they, 'of ploughing up the sand and burying up the manure and the soil out of the reach of the plant?' 'Let us reason together.' What's the use of ploughing at all? Is it not that we may pulverize the soil and bring it to such a state that the little roots and fibres of the plant may shoot out and gather up whatever they can find to nourish it? Is it not to incorporate the manure with the soil and make it of a uniform consistency as it regards quality, &c.

Now the deeper you make the soil the deeper will the roots plunge, and the deeper and more extensively the roots plunge, the more nourishment will they be likely to find, and the less liable will they be to injuries from drought. Plough deep; don't fear burying the manure so deep that the roots will not find it—they will go as deep as you can by any plough ever yet made. It is possible you may not realize so good a crop the first year by burying the manure deeply; you will not lose it, and the next year you will have deeper soil—and in a short time, your land will of course be worth double depth of soil. What makes the intervals and bottom lands so much better than most uplands? Is it not depth of soil? Aye, but nature made that. Take nature's advice and make yours so. If nature has made a plough of the elements and buried her vegetable matter deep, and made a soil ten fold more valuable for it, follow her example. She did not do it all at once, neither need you if you are not able. If you think you have not manure sufficient to make such a soil the first year, or must have the benefit of it immediately, act accordingly, but begin immediately. If you can plough but four inches this year, plough six the next, and increase annually till you get the soil deeper than you can get the point of your plough. We may appear somewhat dogmatized in our advice, but that is of small consequence provided we can dogmatize some into practice, who are now utterly opposed to it. What runs a farm out, as it is called? Is it not shoal ploughing, a scratch over the soil, as if you were afraid of getting out of the reach of the sun and air? We may verily believe this is the principal cause. The remedy must be the reverse course of management.

THE BREEDER & MANAGER.

[From the London Lancet.]

DR. YOUATT'S VETERINARY MEDICINE.

LECTURE XIII.

CORYZA, OZENA, AND DISTEMPER, OR NASAL CATARRH IN THE DOG.

CORYZA—We have coryza in the dog sufficiently plain. We see him snorting in a very peculiar way, with his head protruded, for a minute or two at a time. I say snorting in a peculiar way, for the inspiration is as forcible as the expiration. The air is hurried backward and forward, as if to dislodge something that had lodged on the Schneiderian membrane, and was a source of irritation.

An emetic will usually afford relief. Of the modus operandi I am not certain; possibly, in the act of vomiting, some obstruction or deposition of mucus is forced out. In obstinate cases I have given grain doses of the sulphate of copper, made into a ball with linseed meal, with marked advantage.

OZENA.—We have frequent cases of *ozena* in old dogs. The discharge is abundant and constant, and sometimes fœtid. The Schneiderian membrane, of more than usual sensibility in this animal, is exposed to many a cause of irritation, and debilitated and worn out before its time.—Pugs are particularly subject to ozena. I scarce-ever knew a very old pug that had it not to a greater or less degree. The peculiar depression between the nasal and frontal bones in this breed of dogs, while it almost totally obliterates the frontal sinuses, may narrow the air-passages at that spot, and cause greater irritation there from the usual rush of the air, and especially if the membrane became inflamed or any foreign body insinuated itself.

I have nothing to recommend you here, but cleanliness. It is, in the majority of cases, a disease of old age, and it must take its course.

WORMS IN THE NOSE.—I have seen several cases of *worms* in the nose of the dog, and a sad nuisance they have been. There is a worm inhabiting the stomach and duodenum of young dogs, a frequent cause of sickness, and occasionally of spasmodic colic, when they roll themselves into knots (the ascaris marginata), and of which I shall endeavour to give some account when treating of the vermes. It seems occasionally to take a dislike to its assigned residence, and it wanders rarely into the larger intestines, but often into the œsophagus. A dog had dreadful cough which could not be subdued by bleeding or physic, or sedative or opiate medicine. He was destroyed, and one of these ascarides was found in the trachea. Others find their way into the nasal cavity, and a dreadful source of irritation they are there. Possibly they are endeavouring to escape, in order to undergo one of the changes of form to which they are destined, or they might have been forced into the nostril in the act of vomiting. I once had a dog as a patient whose case I confess I did not understand; he would sneeze and snort and rub his head and nose along the carpet, and fight at his nose and the corners of his mouth. I happened to say that the symptoms, in some respects, resembled those of rabies, and yet that I could not satisfy myself that the dog was rabid. The mention of rabies was sufficient, and in spite of my remonstrances the animal was destroyed. Of course, the previous symptoms led me to examine the nasal cavity among other parts, and I found two of these vermin, one concealed in the middle, and the other in the upper meatus, through neither of which could any strong current of air be forced, and from which the ascarides could not be dislodged. There i a similar account in one of the French veterinary periodicals.

I know not what to advise you to do here, or how in fact clearly to ascertain the existence of the evil.

DISTEMPER.—The next disease of the nasal cavity in the dog deserves particular and lengthened notice, and yet I fear that, although this quadruped has been included in my list of patients for 20 years, and I have seen about twenty thousand cases of distemper, the account which I shall be able to give you of it will not be satisfactory. Nineteen years ago, I should have had no hesitation in telling you that I knew all about it; and now I know but little with certainty.

The *distemper* is a singular name by which to distinguish this malady. When it was first observed on the continent, the rapidity with which it spread, the strange protean appearance which it assumed, and its too frequently fatal termination, surprised and puzzled the veterinarians. They could not tell what to make of it; and they called it "La Maladie des Chiens," the disease or distemper of dogs.

New disease.—It is, comparatively, a new disease. English writers, sixty or seventy years ago, make no mention of it. It was imported from France, although some French authors affirm that it is of British origin. It first appeared as a widely-extended and fatal epidemic in France, in 1714. Two years afterwards it comparatively disappeared, or at least was not recognised as a common disease until the year 1762, when it destroyed a vast number of dogs, and particularly in the neighbourhood of Boulogne. Having once gained footing among us, it has established itself in our country to the vexation and loss of the sportsman, and the annoyance and disgrace of the veterinary surgeon. However keepers, or even men of education may boast of their specifics, it is a sadly fatal disease, and destroys full one third of the canine race.

The ages most subject to it.—Dogs of all ages are subject to its attack. Many, nine and ten years old, have died of pure distemper; and I have seen puppies of only three weeks fall victims to it; but it oftenest appears between the sixth and twelfth month of the animal's life. If it occurs at an early period, it, in the great majority of cases, proves fatal; and if the dog be more than four years old, it generally goes hard with him.—It is fatal in young dogs, because they have not strength to combat a malady insidious and violent. It is fatal in old dogs because the elasticity and energy of the system are gone.

Contagious.—It is undeniably, and highly, contagious; yet it is frequently generated. In this it bears an analogy to mange, farcy, and glanders in the horse. One attack of the disease, and even a severe one, is no absolute security against its re-

turn. The immunity, or preventive influence, is gradually worn out,and in less than three years ceases to exist; and if the dog is then attacked a second time, the malady assumes a milder type.—I have known it, however, occur three times in the same animal, and at last destroy him.

Causes.—Violent catarrh will often terminate in distemper; and low and insufficient feeding will produce it. It frequently follows bad mange, and especially if mercury has been used in the cure of the eruption. When I see a puppy with mange, and that peculiar disease in which the skin becomes corrugated, and more especially if it be a spaniel, and pot-bellied or ricketty, I generally say that I can cure the mange, but that the dog will soon afterwards die of distemper: and so it happens in three cases out of four. Low and insufficient food will predispose to or produce distemper; so will confinement in an ill-ventilated place. Filth of every kind is a powerful predisposing cause. The cellars of the dog-stealers are the very foci of distemper, and not one dog in half a dozen escapes. Whatever debilitates the constitution, predisposes for the reception or the generation of distemper. It however frequently occurs without any apparent exciting cause.

Inoculation.—That it is highly contagious cannot admit of doubt. A healthly dog can seldom for many days be kept with another that labours under distemper without becoming affected; and I have seen it communicated by the slightest momentary contact. Yet there is a great deal of caprice about this; and I have more than once kept a dog in the foul ward of my hospital for several successive weeks, and he has not become infected. Inoculation with the matter which flows from the nose, either limpid or purulent, and in an early or advanced stage of the distemper, will, with few exceptions, produce the disease; yet I have failed in attempting to communicate it even by this method. Inoculation used to be recommended as producing a milder and less fatal disease: so far as my experience goes, the contrary has been the result.

Epidemic.—While it is thus generated and contagious, distemper is, likewise, epidemic. It occurs more frequently in the spring and autumn than in the winter, and, without comparison, more frequently than in the summer. If one or two dogs in a certain district are affected, we may be perfectly assured that it will soon extensively prevail there; and, where the disease could not possibly be communicated by contagion. Sometimes it is, properly speaking, epidemic. It rages all over the country. At other times it is endemic. It is confined to some particular district.

The very forms of it are Epidemic.—Not only is the disease epidemic, or endemic, but the form which it assumes is so. In one season, almost every dog with distemper has violent fits; at another time, in the majority of cases, there will be considerable chest affection, running on to pneumonia; a few months afterwards, a great proportion of them will be worn down by diarrhœa, which no medicine will arrest; and presently it will be scarcely distinguishable from mild catarrh.

Difference in different kinds of dogs.—It varies much with different breeds. The shepherd's dog, generally speaking, cares little about it; he is scarcely ill a day. The usefulness of this breed seems to bestow on him an exemption from the malady. He is too valuable to be thus prematurely cut off. The cur is not often seriously affected. The terrier has it more severely, especially the white terrier. The hound comes next in the order of severity; and next, the setter. With the small spaniel it is more dangerous; more so with the pointer, especially if he has the disease early; still more with the greyhound; next with the pug; and it is most fatal of all with the Newfoundland. Should a foreign dog be affected, he almost certainly dies. The greater part of the northern dogs brought by Captain Parry did not survive a twelvemonth; and the delicate Italian greyhound has little chance.

Different in different breeds.—Not only does it thus differ in different species of dogs, but in different breeds of the same species. I have known several gentlemen who have laboured in vain for many a year to rear particular and valuable breeds of pointers and greyhounds. The distemper would uniformly carry off five out of six. Other sportsmen laugh at the supposed danger of distemper, and declare that they seldom lose a dog. It is said that in proportion as a dog is highly bred the danger of distemper increases. I hardly know what is meant by being highly bred,—breeding in and in, I suppose,—selecting those that have the finest form and scent, and are stanch at their work; and, when a breed has been found possessing these qualities,confining ourselves to the best of that breed. If that be the meaning of the term, I can easily conceive that in proportion as he is most highly bred, he will be in danger from this disease, because, although there is not a domestic animal that may not be improved, and valuably so to a certain point, by breeding from the closest consanguinity when the stock is excellent, it is only to a certain extent and for a certain time. The effeminacy that follows is as rapid as the previous improvement. We need not go from the breed, or quite from the family, but we must now and then have alliances a little remote, or delicacy and degeneracy will follow.—This has not been sufficiently attended to with regard to any domestic animal. Besides this, I can suppose the fineness of form, and intense love of the sport, which are diligently cultivated in our dogs. may be accompanied by an irritability of constitution unfriendly to a successful struggle with distemper. An hereditary predisposition to certain diseases cannot be denied, and is not sufficiently attended to. When a peculiar fatality has attended a certain breed, I have advised the owner to cross it from the kennel of one of those gentlemen who boasted of his success in the treatment of distemper. This has generally succeeded far beyond expectations.

Symptoms.—It is time, however, to proceed to the symptoms of this malady; but here I feel very great difficulty, for it is, what I have called it, a truly protean disease; and it is impossible to fix on any symptom which shall invariably characterise it. Although it may be a little too early to speak of the nature of the disease, it may enable you to follow me with greater ease and satisfaction, if I say that it is inflammation of the mucus surfaces, and more particularly of the mucous membrane lining the respiratory passages, and commencing in the Schneiderian membrane. It is what I have termed it, yet not quite discarding its well-known and long-recognised title, *nasal catarrh.*

Early Symptoms.—I would take as an early and frequent symptom, a very gradual loss of appetite, spirits, and condition. The eyes will appear weak and watery: and there will be a very slight limpid discharge from the nose. In the morning there will probably be a little indurated mucus at the inner corner of the eye. This, perhaps, will continue two or three weeks without any serious or scarcely-recognisable illness.—Then a peculiar husking will be heard, altogether different from the sonorous cough, of catarrh, or the wheezing of asthma. It will be an apparent attempt to get something from the fauces or throat.

Cough or Husk.—You must accustom yourselves to this, so as to be enabled in a moment to recognise the husk of distemper, and that even in the dark. Many a dog will be brought to you as distempered, with this character only of the disease, that he has cough, but a kind of cough, either asthmatic or harsh, that will never deceive the experienced practitioner. It is an apparent attempt to get something from the throat. The disease has now advanced beyond the Schneiderian membrane to the fauces.

By degrees the discharge from the eyes and nose, and particularly the former, will increase.—More mucus will collect in the corners of the eyes, and the eyes, will sometimes be closed in the morning. The conjunctiva, particularly that portion which covers the sclerotica, will be considerably injected; but it will not be the usual intense red of inflammation. The vessels will be large and turgid rather than numerous, and of a darkish hue.

The Eye.—Occasionally, however, the inflammation of the conjunctiva all at once is exceedingly intense, and the membrane is vividly red, and the eye impatient of light. Whichever be the case, an opacity spreads over the cornea, and this is quickly succeeded by ulceration. The first spot of ulceration is generally found precisely in the centre of the cornea, and is perfectly circular: this will distinguish it from a scratch or other injury. The ulcer widens and deepens, and sometimes eats through the cornea, and the aqueous humour escapes. Fungous granulations spring from it, and protrude through the lids; and the animal evidently suffers extreme torture. A remarkable peculiarity attends this affection of the eye. However violent may be the inflammation, and whatever disorganisation it may produce, if we can cure the distemper, the granulations will disappear, the ulcer will heal, the opacity will clear away, and the eye will not eventually suffer in the slightest degree. One-fourth part of the mischief in other cases, and unconnected with distemper, would inevitably terminate in blindness; but permanent blindness is rarely the consequence of distemper.

Distinction between it and Rabies.—It may not be improper here to glance at the different appearance of the eye in rabies. In the early stage of rabies, there is an unnatural and often terrific brightness of the eye. The cornea in distemper is, from the first, rather clouded. In rabies there

is frequent strabismus, with the axis distorted outwards. The apparent squinting of the eye in distemper is caused by the protrusion, probably unequal protrusion, of the membrana nictitans over a portion of the eye at the inner canthus, to protect it from the light. Finally, in rabies there is not the white cloudiness which I have described, and the occasional ulceration with very little cloudiness, and the ulceration confined to the cornea; but a dense green opacity comes on, speedily followed by disorganisation and ulceration of every part of the eye.

Progress of Symptoms.—The dog will now be evidently feverish, and he will shiver and creep to the fire. He will more evidently and rapidly lose flesh. The huskiness will be more frequent and troublesome, and the discharge from the nose will have great consistence. It will be often and violently sneezed out, and will become more or less purulent. It will stick about the nostrils and plug them up, and thus afford a considerable mechanical obstruction to the breathing. The young practitioner must take care that this difficulty of breathing, which may be removed by merely sponging the nostrils, is not mistaken for the laborious respiration of pneumonia. This is of very great consequence, for the bleeding which intense inflammation would indicate, would be inevitably fatal in this stage of the disease. Therefore whenever you see the labouring flank, look at the nose, and examine whether there is not a mechanical cause for it in the accumulation of the hardened mucus.

Fits.—The progress of the disease is now uncertain. Sometimes fits come on, speedily following the intense inflammation of the eye; or the inflammation of the nasal cavity appears to be communicated, by proximity, to the membranes of the brain, or the constitution is now become debilitated and irritable, and therefore disposed to take on this morbid action. One fit is a serious thing. If it is followed by a second, within a day or two, the chances of cure are diminished; and if they rapidly succeed each other, the dog is, ninety-nine times out of a hundred, lost.

These fits seldom appear without warning; and if their approach is carefully watched, they may possibly be prevented. However indisposed to eat the dog may have previously been, the appetite returns when the fits are at hand, and the animal becomes absolutely voracious. Nature seems to be providing for the strange expenditure of animal power which epilepsy will soon occasion.—The mucus almost entirely disappears from the eyes, and the discharge from the nose usually abates.

Caution as to sudden changes.—Do not be deceived here. Sudden changes for the better are deceitful in almost every disease—they are peculiarly so here. The person who knows not the real character of the malady, will often form a flattering but false prognostic. You will hesitate and await the issue, or, rather, you will be assured that, in almost every case of this sudden apparent amendment, the termination will be fatal. For an hour or more before the fit comes on, there will be a champing of the lower jaw, frothing at the mouth, and discharge of saliva. The champing of the jaw will invariably precede every succeeding fit, but only for a short time. There will also be twitching of some part of the frame, and usually of the mouth, cheek, or eyelid. It is of some consequence to attend to this, as enabling us to distinguish between the fits of distemper and those of teething, worms, or unusual excitement. The latter come on suddenly. The dog is apparently well, and racing about full of spirits, and without a moment's warning he falls into violent convulsions.

Further distinction between it and Rabies.—We may here, likewise, be enabled to distinguish between rabies and distemper. When a person unacquainted with dogs, sees one of these animals struggling in a fit, or running along unconscious of every surrounding object, or snapping at everything in his way, whether it be a human being or a stone, he raises the cry of "mad dog," and the poor brute is immediately sacrificed. The very existence of a fit is a proof positive that the dog is not mad. No epilepsy accompanies rabies in any stage of that disease. The dog even in a distemper fit will often be exceedingly violent, and strangely disposed to do mischief; he will fly at the person who meddles with him even in the slightest degree. It is not pleasant to be bitten, but be not alarmed. There is no madness. They are altogether different diseases. They are diseases of different systems. They can never run into each other. While there are no fits in rabies, fits can never produce rabies.

Affection of the respiratory passages.—The inflammation of the membrane of the nose and fauces, determined by accident, or by atmospheric influence, or by the state of the constitution, is sometimes propagated along the mucous membrane of the wind-pipe, and the dog exhibits unequivocal proofs of chest affection, or decided pneumonia.

The Bowels.—At other times the bowels become affected, and a violent purging comes on.—The fæces vary from white, with a slight tinge of grey, to a dark-slate or olive colour. By degrees mucus begins to mingle with the fæcal discharge, and then streaks of blood; the fæcal matter lessens, and the whole seems to consist of mingled mucus and blood, and, from first to last, the stools are insufferably offensive. When the mingled blood and mucus appear, so much inflammation exists in the intestinal canal that the case is almost hopeless.

The Nasal discharge.—The discharge from the nose is now decidedly purulent. Why it is white and without smell, and the dog is not too much emaciated, the termination may be favourable; but when it becomes of a darker colour and mingled with blood, and stinking, the æthmoid or turbinated bones are becoming carious, and death supervenes. This will particularly be the case if the mouth and lips swell, and ulcers begin to appear on them, and the gums are ulcerated, and a sanious and highly offensive discharge proceeds from the mouth. A singular, half-fœtid, deathy smell, arising from the dog generally, is the almost invariable precursor of death.

Some other characters of the disease and its treatment will be considered in the next lecture.

Avoid all low company—in parts, in manners, and in merit.

A faithful friend is the medicine of life.

THE GARDENER.

[From the Horticultural Register.]

FLORICULTURE FOR THE PARLOR-WINDOW.

The following remarks are from a sheet recently published by G. C. Barrett, and are directions for the management of bulbs and plants in the parlor; and as a little science in parlor-window Floriculture might be beneficial to practice, we here insert them.

"*Hyacinths* and other bulbs that are intended to flower in glasses, should be placed therein during October and November, and kept in a cool room. After the fibres begin to push a few shoots, the glasses may be taken to the warmest apartments to cause them to flower early. Bring a few from the coldest to the warmest every two weeks, and thus a succession of bloom may be kept up from January to March.

Supply the bulbs with fresh water once a week, in which period they will inhale all the nutritive gas that they derive from that element, if they are in a growing state. Fill the glasses with water, so that the bottom of the bulb may just touch it.

The water should be changed as it becomes impure; draw the roots entirely out of the glasses; rinse off the fibres in clean water, and wash the inside of the glasses well. Care should be taken that the water does not freeze, as it would not only burst the glass, but cause the fibres to decay.

December, January and February, is the trying season for all plants that are kept in rooms, especially those that are desired to have a flourishing aspect through the winter, a few general instructions will perhaps be desirable to all those who are engaged in this interesting occupation, which forms a luxury through the retired hours of a winter season, and with very little attention, many are the beauties of vegetative nature that will be developed to the gratification of every reflecting mind.

All the varieties of *Polyanthus Narcissus* are well adapted for indoor flowering. The Grande Monarque and Roman are charming flowers; the latter is perhaps the earliest of all bulbs; if potted in October or November, it will bloom by Christmas; the flowers are four or five in number, of a delicate satin white, with double cups of a rich jessamine perfume.

Plants that are kept in rooms generally are such as require a medium temperature, say forty degrees. Sitting rooms or parlors, about this season, are, for the most part, heated from fifty-five to sixty-five, and very seldom has the air any admittance into these apartments, thus keeping the temperature from fifteen to twenty-five degrees higher than the nature of the plants requires, and excluding that fresh air which is requisite to support a forced vegetative principle. Therefore, as far as practicable let the plants be kept in a room adjoining to one where there is fire heat, and the intervening door can be opened when desirable. They will admit sometimes of being as low as thirty-three.

If they be constantly kept where there is fire, let the window be opened some inches, two or three times a day, for a few minutes, thereby mak-

ing the air of the apartment more congenial, both for animal and vegetable nature.

There are very few plants killed for the want of water, during winter. All that is necessary is merely to keep the soil in a moist state, that is, do not let it get so dry that you can divide the particles of earth, nor so wet that they could be beat to clay. The frequency of watering can be best regulated by the person doing it, as it depends entirely upon the size of the pot or jar in proportion to the plant, whether it is too little or too large, and the situation it stands in, whether moist or arid. Never allow any quantity of water to stand in flats or saucers except bulbs. This is too frequently practised with plants in general. Such as *Calla Æthiopica*, or African Lily, will do well, as water is its element, (like Sagittaria in this country;) and the Hydrangea hortensis, when in a growing state, will do admirably under such treatment. Many plants may do well for some time, but it being so contrary to their nature, causes premature decay; a fetid stagnation takes place at the roots, the foliage becomes yellow, and the plant stunted; and in the winter season, death will ensue. Clean the foliage with spunge and water frequently, to remove all dust, &c. Turn the plants frequently, to prevent them growing to one side.

Camellias, when in bud and flower, should never be allowed to become the least dry, neither confined from fresh air. The effects would be, that the buds would become stinted, dry, and drop off. Therefore to have these in perfection, attend strictly to watering. Give frequent airings, and wash the leaves once in two weeks with water. Never keep them above one day in a room, where there is a strong coal fire, and not above two days where wood is used as fuel. Most *Camellias* will bear three degrees of frost without the smallest injury, so that they are easier kept than Geraniums, except when they are in bloom. In that state, frost will destroy the flowers. The air of a close cellar is destruction to the buds."

[From the American Gardener's Magazine.]

REMARKS ON THE CULTIVATION OF THE GRAPE VINE.—*By Pemberton.*

It is not my intention to track the practical gardener, nor to write a treatise on the raising of the vine; but simply to record a few observations and experiments made while amusing myself in cultivating a few varieties in my own garden, in the open air: and this, I think, is the only method of understanding the successful management, and obtaining a true knowledge of growing to perfection, one of the most delicious and excellent fruits; and one which may be had, with little care and attention, by every family in the city or country.

In the first place, I do not approve of the practice of purchasing old plants, and of uncertain kinds, of the vine. I much prefer to procure cuttings of such as I am very confident are true to the name; for, if properly attended to, they will come into a bearing state almost as soon as those set out with roots. I take the cuttings and prepare them by pruning them to the length of eight or nine inches, leaving three eyes to each, put them down where I intend to have my standard vines, and mark the name on some kind of a lable that will retain the same for as great a length of time as possible; when likely to become obliterated, I have it renewed. A new method of writing on zinc labels, with a chemical ink, has lately been discovered, obviating all the difficulties which have heretofore existed; they having the property of retaining the name for many years. I have lately tried them, and would highly recommend them. They may be had at any of the seed-stores.

I put two cuttings in each place; if they both grow, I remove one, so as not to have it interfere with the intended standard. They must be put rather deep in the ground, leaving only one eye (the third) above it, and rubbing off the others. In the fall of the year, the vine, after it has made its annual growth, if a foreign variety, should be laid down and protected with a little straw or leaves. The Isabella, and all native grapes, will bear the winter, unprotected, in all common seasons, if they are not pruned till February. In the latter part of February, or beginning of March, they should be pruned down to three eyes, cutting off within about an inch of a strong and prominent bud. When the vine pushes its shoots in the spring, and they have attained the height of eight or ten inches, select out the strongest one, (rubbing off all others) which should be trained to a single, strong stake, which will not be likely to be broken by the wind: it should be encouraged in its growth, as much as possible, by plucking off all useless side shoots every fortnight, so as to throw the whole strength into the main one, and regularly tying the vine to the stake. In the autumn, the vine will have made a fine shoot, six or eight feet in length, and of the thickness of nearly half an inch. They should be shortened to about four feet, and, upon the approach of winter, should again be laid down and covered with any light substance, so as to keep them from the sun. The object of protection is to prevent the circulation of the sap in the vine during sunshine, and at night from closing up the pores by freezing. It is not the cold, as many imagine, that injures the vine, but the heat of the sun during the months of February, March and April; the warm days inducing the sap to flow into the buds very rapidly, and when in that state, freezing in cold nights, so as to burst or rupture the inner bark (or albumen,) which is composed of small vessels, corresponding to the outer cuticle of the animal creation. If the vines could be kept entirely cold until April, no injury would occur to them, if they were not covered at all. I have put this to the test several times. But if the sun is suffered to shine on them during February and March, continually freezing and thawing, it is almost sure death to them.

In training vines, I greatly perfer a horizontal direction to any other. I also prefer to train them all one way, when convenient. Any method of training, however, provided it be done judiciously, will answer the same end. The trellis should run from south-east to north-west, so as not to have the morning sun on both sides of the vine. In training, leave the wood long on the north-east side, so as to shelter the grapes from the chilling east winds and morning sun, which, in my opinion, chills the fruit, and weaken both the wood and fruit, and by that means, brings on the mildew from debility. On the south-west, I prune off all the laterals, tendrils, or useless wood, so that by this, a vinous hedge will be formed, that protects the fruit from the north-east, and gives a warm, soft heat on the south-west. This method I have tried for several years, and have never failed in getting a good crop, while all other methods and positions have failed. Grapes are injured materially by late prunings when the wood is scarcely done growing; it weakens the vine, by destroying the return of the sap, and the fruit stops growing, becomes soft, sour, and wholly unfit for use. Vines ought not to be pruned much after July; the fruit needs the protection of the leaves as the nights grow colder; they were formed for that purpose, and act as a covering to modify the air, keep off the cold at night, the scorching rays of the sun during the day, and to protect the fruit from heavy rains and other injuries.

These are a very few hasty remarks, which I have thrown together: if you deem them worthy an insertion in your forthcoming magazine, you are at liberty to make use of them. In a future number, I shall continue them further.

Yours, PEMBERTON.

Boston, Dec. 16, 1834.

[From the Horticultural Register & Gardener's Mag.]

GARDENER'S WORK FOR APRIL.

In the eastern states, and on moist and heavy land in the middle states, the greater part of our garden crops are usually sown in April. You may now sow such seeds as we directed to be sown in March, if the site, soil, or season rendered earlier sowing improper or injudicious. You should, on no account, plough, harrow, or dig a stiff and moist soil, while it is wet, and of course clammy and adhesive. But a light sandy soil will derive benefit from being stirred while moist.

It was well observed by Mr. M'Mahon that "earth of a consistence that will hold water longest without becoming hard when dry, is that of all others the best adapted for raising the generality of plants in the greatest perfection. The great art of improving sandy and clay soils is to give the former such dressings of clay, cow dung, and other kinds of manure, as will have a tendency to bind and make it more compact, and consequently more retentive of moisture; and to the latter coats of sandy earth, pond mud, horse dung, &c. It is better, as a general rule, not to sow the seeds for the principal garden crops till the soil becomes somewhat warm and dry, lest the young plant should be frost-bitten or chilled beyond recovery.

The following are among the vegetables which you may sow this month, if the season and soil will permit. Artichoke—The seeds may be sown in a bed in such quantity that the young plants will be about six inches apart each way, allowing for accidental bad seeds, &c. They should be covered about three quarters of an inch deep.—They may be transplanted next spring in rows five feet apart, the plants standing two feet apart in the rows. Asparagus—For valuable directions relative to the culture of this vegetable, see our March No., p. 79. Beans—For garden, or English beans, one pint of seed will be requisite for every eighty feet of row. The rows should be about two and a half feet apart, the seeds about

three inches distant from each other in the rows. Kidney Beans—Plant in a dry warm soil, near the last of this month for early use; but the planting of the principal crops had better be deferred till near the middle of May. Draw drills an inch deep and two feet or thirty inches apart; drop the seeds two inches apart, and cover not more than an inch deep. Beets—A few beets, in a warm soil, but the main crop about the middle of May. For the long rooted sorts trench to the depth of eighteen inches. Sow in drills an inch and a half deep, a foot apart, or dot in the seed with a thick blunt ended dibble, in rows that distance, making holes ten or twelve inches apart and about an inch and a half deep. Drop two or three seeds in a hole, to be thinned out so as to leave but one in a place. For cabbages, see the calendar of last month. Cucumbers may be propagated according to Mr. Armstrong's method, which is as follows: "Scoop as many turnips as you propose to have *hills;* fill them with good garden mould, and plunge them into a hot bed." It would be advisable, however, after your scooped turnip is filled with mould, to make a hole through its bottom like that in the bottom of a flower pot, to prevent the roots of the cucumber plant from being too much confined. You may also propagate squashes, pumpkins, watermelons, &c. in the same way. Grass sods or bits of turf may also be used as substitutes for garden pots in forwarding vegetables, according to a method described in our last number, pp. 112, 113. Carrots and parsnips may be sown as directed last month, p. 116. All the sorts may be sown, either broad cast or in double drills; the latter is preferable, allowing the roots to be drawn regularly with less waste. Rhubarb—Best raised from seed. Common culture. Salsify, or oyster plant is raised from seed or roots. It is very hardy, grows in almost any soil. It should be covered with sand or earth, pots or boxes, so as to bleach it as soon as vegetation commences in the spring. Spinage may be sown in April, broad cast. Two ounces of seed will sow a bed four feet and a half by thirty feet. In drills one ounce will sow the same space. The drills should be from nine to twelve inches apart, and the seed sown thinly in the rows.

Manifold Virtues of the Elder Tree.—Sir J. E. Smith has remarked that this tree is, as it were, a whole magazine of physic to rustic practitioners. It is said that if sheep that have the rot can get at the bark and young shoots of elder they will soon cure themselves. The wine made from elder berries is too well known by families in the country, to need any encomiums; it is the only wine the cottager can procure, and when well made is a most excellent and whosesome drink, taken warm before going to bed. It causes gentle perspiration, and is a mild opiate. If a rich syrup be made from ripe elder berries, and a few bitter almonds, when added to brandy, it has all the flavor of the very best cherry brandy. The white elder berries, when ripe make wine much resembling grape wine. The buds and the young tender shoots are greatly admired as pickle. The leaves of the elder tree are often put into the subterranean paths of moles, to drive those noxious little animals from the garden. If fruit trees, flowering shrubs, corn or other vegetables, be whipped with the green leaves of the elder branches, it is said that insects will not attach themselves to them. An infusion of these leaves in water is good to sprinkle over rose-buds, and other flowers subject to blight, and the devastation of catterpillars.—*Leigh Hunt's London Journal.*

MISCELLANEOUS.

Pleasure.—"It is difficult to say what pleasure means. Pleasure bears a differet sense to every different person. Pleasure to a country Miss just come out, means a "race ball, and so many partners, that she has danced till she can hardly stand." Pleasure to an aspirant after fashion means "a card for Devonshire House, or a nod from Lady————." Pleasure to a schoolboy means "tying a string to his school-fellow's toe when he is asleep, and pulling it till he awakens him." Pleasure to a man of inquiring mind means "a toad inside a stone, or a beetle running with his head off."—Pleasure to a man of taste means "a first rate *artiste*, and a good dinner." Pleasure to a laboring man means "doing nothing." Pleasure to a fine lady means "having something to do to drive away the time." Pleasure to antiquarians means "an illegible inscription." Pleasure to a connoisseur means "a dark, invisible, very fine picture." Pleasure to a philosopher, a modern philosopher, a young philosopher, means "liking nothing, despising every t ing, and proving every one a simpleton except himself." Pleasure to a beggar means "a sovereign by mistake instead of a shilling." Pleasure to a sailor "a fresh breeze and a sight of land." Pleasure to the afflicted "a tear." Pleasure to the sweetest of all tempers "the last word in argument." Pleasure to the social, "the human face divine!" Pleasure to the morose, "I shan't see a soul for the next six months." Pleasure to an author "the last page of his manuscript—bliss inexpressible—'Finis.' Pleasure to all, to every one in their way, and that way a different one."

Durable Whitewash.—I am enabled to certify the efficacy of marine salt in fixing whitewash made of lime. In the year 1795, when I was director of the naval artillery at the port of Toulon, I was commissioned to ascertain the utility of a method proposed by the master painter of that port, M. Maquilan, for whitewashing the ships between deck, and likewise their holds, in a durable manner, by means of lime. Our report was in favor of this process, which consists in saturating water in which the lime is slacked with muriate of soda, (common salt). The whitewash produced by it is very permanent, does not crack, nor come off upon one's hands or clothes. The experiment was made only on wood. It appears from M. St. Bernarde's account, that it succeeded equally well on walls.—*Annales des Arts et Manufactures.*

Great Sale.—We understand that the lot of ground now occupied by Mr. Thorburn, in Liberty-st. near Broadway, N.Y. as a seed store, has been sold for $100,000. It fronts on Liberty-st. nearly 100 feet and about 100 feet deep; about 12 years since, Mr. Thorburn bought this property for less than $20,000. It will be recollected that Mr. Thorburn's seed store was formerly the meeting house of the ancient and respectable Society of Friends.

Walking upon Water.—"Le Voleur" quotes a paragraph from a German paper, which states that a Swedish fisherman has made several experiments with complete success, of walking upon water, which he does with as much ease as upon land, by means of slight thin shoes. These shoes are made in the shape of a small canoe, and are attached together, so that they can only be separated so far as to ensure the power of walking with ease.

Scotch method of preserving eggs.—Dip them during one or two minutes in boiling water. The white of the egg then forms a kind of membrane, which envelopes the interior and defends it from the air.

It is stated in the New Orleans Advertiser that upwards of *five millions of acres* of land in Louisiana are subject to annual inundation, and that that amount comprises about one-sixth of the entire territory of the state. From the same paper we learn that the gross amount of land under cultivation does not exceed forty thousand acres, the annual product of which is about ten millions of dollars, or an average of two hundred and fifty dollars per acre. In view of these singular and striking facts, the editor urges the necessity of suitable efforts to reclaim the inundated lands, the profits arising from which would, he contends, be enormous.

A man who does not possess a particular talent, satisfies himself by despising it; he removes this obstacle which stands between him and merit, and by this means he finds himself on a level with him whose labors he is afraid of.

Sometimes there are living beings in nature as beautiful as in romance. Reality surpasses imagination; and we see brightening and moving before our eyes, sights dearer to our hearts than any we ever beheld in the land of sleep.

A great woman not imperious, a fair woman not vain, a woman of common talents not jealous, an accomplished woman who scorns to shine—are four wonders just great enough to be divided among the four quarters of the globe.

It is an unpleasant thing to love, when we have not fortune great enough to render those we love as happy as they can desire.

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To Correspondents—Effects of the Winter—Horticultural Society of Maryland, and its proceedings—Discrepancies among writers on Agriculture—On Ploughing—Mr. Youatt's 13th Lecture on Veterinary Medicine—Horticulture for the parlor window—On the cultivation of the Grape vine—Gardener's work for April—Virtues of the Elder tree—Pleasure—Durable whitewash—Sale of Thornburn's property—Walking upon water—Scotch method of preserving Eggs—Inundated land in Louisiana—Scraps—Prices current—Advertisements.

BALTIMORE PRODUCE MARKET.

☞ *These Prices are carefully corrected every* MONDAY.

	PER.	FROM	TO
BEANS, white field,	bushel.	2 00	2 50
CATTLE, on the hoof,	100lbs.	6 00	6 50
Slaughtered,	"	3 00	4 00
CORN, yellow,	bushel.	67	—
White,	"	67	—
COTTON, Virginia,	pound.	16	17½
North Carolina,	"	—	—
Upland,	"	17¼	18½
FEATHERS,	pound.	35	37
FLAXSEED,	bushel.	1 12	1 25
FLOUR—Best white wheat family,	barrel.	6 25	6 75
Do. do. baker's	"	5 75	6 25
Do. do. Superfine,	"	5 00	5 25
Super Howard street,	"	5 00	—
" " wagon price,	"	4 87	—
City Mills, extra,	"	—	—
Do.	"	5 25	—
Susquehanna,	"	5 00	—
Rye,	"	4 00	4 50
GRASS SEEDS, red Clover,	bushel.	5 00	5 50
Timothy (herds of the north)	"	2 50	3 00
Orchard,	"	3 00	3 25
Tall meadow Oat,	"	2 00	2 50
Herds, or red top,	"	1 25	—
HAY, in bulk,	ton.	16 00	18 00
HEMP, country, dew rotted,	pound.	6	7
" water rotted,	"	7	8
HOGS, on the hoof,	100lb.	6 00	—
Slaughtered,	"	—	—
HOPS—first sort,	pound.	12	—
second,	"	10	—
refuse,	"	8	—
LIME,	bushel.	33	35
MUSTARD SEED, Domestic,	"	5 00	6 00
OATS,	"	36	40
PEAS, red eye,	bushel.	—	—
Black eye,	"	87	1 00
Lady,	"	100	—
PLASTER PARIS, in the stone,	ton.	3 00	—
Ground,	barrel.	1 37	—
PALMA CHRISTA BEAN,	bushel.	2 00	—
RAGS,	pound.	3	4
RYE,	bushel.	69	—
TOBACCO, crop, common,	100 lbs	3 75	5 00
" brown and red,	"	5 00	7 00
" fine red,	"	7 00	9 00
" wrappery, suitable for segars,	"	6 00	12 00
" yellow and red,	"	8 00	12 00
" yellow,	"	9 00	12 00
" fine yellow,	"	12 00	16 00
Seconds, as in quality,	"	4 00	5 00
" ground leaf,	"	5 00	9 00
Virginia,	"	5 00	10 00
Rappahannock,	"	—	—
Kentucky,	"	6 00	9 00
WHEAT, white,	bushel.	1 18	1 23
Red,	"	1 10	1 14
WHISKEY, 1st pf. in bbls.	gallon.	31	31½
" in hhds.	"	31	—
" wagon price,	"	27½	—
WAGON FREIGHTS, to Pittsburgh,	100 lbs	2 00	—
To Wheeling,	"	2 25	—
		washed.	*unwash*
WOOL, Prime & Saxon Fleeces,	pound.	52 *to* 62	26 *to* 28
Full Merino,	"	46 52	24 26
Three fourths Merino,	"	39 46	23 24
One half do	"	35 39	23 24
Common & one fourth Meri.	"	32 34	22 24
Pulled,	"	33 35	23 26

WANTED,

A GOOD JACK & JENNY, or either, for which a fair price will be paid. Address, with *minute description* as to age, color, height, size and general appearance, character as a breeder, and *price*,

I. I. HITCHCOCK,
mh 17 Amer. Far. Estab.

POINTER.

A FIRST rate Pointer Slut, of pure blood, 6 months old, for sale at this establishment. mh 17

BALTIMORE PROVISION MARKET.

	PER.	FROM.	TO.
APPLES,	barrel.	—	—
BACON, hams, new,	pound.	10	11
Shoulders,	"	8	9
Middlings,	"	8	—
BUTTER, printed, in lbs. & half lbs.	"	37	50
Roll,	"	15	25
CIDER,	barrel.	—	—
CALVES, three to six weeks old	each.	3 00	6 00
COWS, new milch,	"	17 00	30 00
Dry,	"	8 00	12 00
CORN MEAL, for family use,	100lbs.	1 50	—
CHOP RYE,	"	1 50	—
EGGS,	dozen.	15	17
FISH, Shad, salted,	barrel.	5 75	6 00
Herrings, salted, No. 1,	"	4 75	—
Mackerel, No. 1, 2 & 3,	"	5 50	6 75
Cod, salted,	cwt.	2 25	—
LAMBS, alive,	each.	1 25	2 00
Slaughtered,	quart'r	37	50
LARD,	pound.	8	9
ONIONS,	bushel.	62	75
POULTRY, Fowls,	dozen.	1 50	2 25
Ducks,	"	—	2 50
POTATOES, Irish,	bushel.	62	75
Sweet,	"	—	—
TURNIPS,	"	75	—
VEAL, fore quarters,	pound.	3½	4
Hind do.	"	6½	—

ADVERTISEMENTS

A SMALL JACK,
JACKS & JENNY, FOR SALE.

FOR sale, a small JACK, 4 years old, has never been tried, and is therefore without any fixed character. He can be had for $150.

Also, two or three very valuable young Jacks of first rate stock and great promise—their measurement and *exact* description will shortly be received and published; one is upwards of 13 hands high, nearly 5 years old, and likely to be very large and valuable. Price $600. His sire was recently sold for $1000.

A fine Jenny also, of good size, in foal to a first rate jack which lately sold for $1000. She may be had as she is for $300—a great bargain. Enquire of

april 6 I. I. HITCHCOCK.

DEVON HEIFER.

A beautiful Devon Heifer one year old—of pure blood, and good size—for Sale for $50 Cash. Application to be made to I. I. HITCHCOCK,
mh. 31. Amer. Far. Estab.

BUFFALO BERRY TREE.

SINCE it was ascertained that this tree is diætious (the male and female being distinct trees) we have hesitated to send it when ordered, because our trees are too young yet for their sex to be developed. Under these circumstances we propose to furnish single trees (the sex being unknown) on the following terms:—Trees less than two feet in height at 50 cents each, and those above two feet at 75 cents a piece. When their sex shall have been ascertained we will furnish either male or female trees at $1,25 each, and at $2 per pair. By this arrangement time may be gained by taking young trees this spring and putting them out, relying on the future for mates for them, and nothing can be lost in point of price of them. We have a few from 1½ to 3 feet high, which we will put up to order on the terms above stated.

SINCLAIR & MOORE.
March 31, 1835.

BENE SEED.

JUST RECEIVED at this Establishment, and for sale, by the pound or in 12½ cent papers, a small quantity of the seed of this most valuable plant. It is very efficacious in the Bowel Complaints of children, and not difficult to be administered. The seed should be planted in April, in hills like beans, and the leaves will be in perfection in June. Two or three leaves being put into a tumbler of spring water, for 10 or 15 minutes, convert it into a mucilage, which being tasteless, children readily drink.

ORNAMENTAL AND FRUIT TREES.

BARTRAM BOTANIC GARDEN.—The subscriber has for sale at his Garden and Nursery, Kingsessing, near Philadelphia, a large assortment of Fruit Trees of suitable sizes for transplanting, embracing every variety of Apples, Pears, Cherries, Plums, Apricots, Grapes, Raspberries, and Currants, together with a large assortment of Green House Plants, Ornamental Trees, Flowering Shrubs, Evergrens, Vines and Creepers, Honeysuckles, Roses, Carnations and Pinks, Herbaceous Perennial Flowering Plants, &c. &c. comprising as great an assortment as any other Garden in the United States.

Orders per mail, or left at Alderman Bartram's office, No. 126 Walnut street, will meet with prompt attention, and the articles will be delivered in Philadelphia, or forwarded to order, packed in such manner as to bear transportation in safety to any part of the United States.

ROBERT CARR.

☞ The usual annual spring public sale of Plants, including a large collection of the finest Prize Dahlias, will be held as soon as the weather will permit, of which due notice will be given in the papers. mh. 31.

SUPERIOR CATTLE FOR SALE,

OF the Devon, and Devon & Short Horn blood, at Brookland Wood Farm, the residence of Richard Caton, ten miles from Baltimore, on the Susquehanna Rail Road, and on the Falls Turnpike Road, consisting of

Devon Bulls, Heifers and Calves, of all ages of each denomination, from 8 months to 4 years—price, forty to one hundred dollars each, according to age and quality.

Devon and Durham Bulls, the offspring of Devon Cows, by the Short Horn Durham Bull Tecumseh. It is supposed by those persons in England who have dairies of this species, that they will be found superior to all others, uniting the beauty of form, hardiness of constitution, propensity to fatten, and richness of milk appertaining to the Devon blood, and product of milk of the Durham—price, forty to one hundred dollars. Apply to

Feb. 3, 1835. THOMAS BEVAN, Manager.

AGRICULTURAL IMPLEMENTS, GRASS SEEDS, &c.

SINCLAIR & MOORE offer for sale at the Maryland Agricultural Repository, Light street, near Pratt street wharf, a general assortment of PLOUGHS of the most approved kinds, adapted to the different kinds of lands and various purposes of the farmer.

Among them are the self-sharpening Plough, which has the advantage of a moveable steel point from 15 to 24 inches long, which can be reversed, as a bevel is formed by wearing, and advanced as it becomes shorter, so as to bring into actual wear from 12 to 18 inches of solid wrought bar—of assorted sizes, from the small seed plough to large three horse.

Wood's patent Plough, of assorted sizes, with cast shares
Sinclair & Moore's improved do do do do
McCormick's improved do do wrought shares
Barshear, from 1 horse to heavy 3 horse, do do
Cary Plough, having the shape of the old well known Cary, but has a cast mould board and wrought share —2 sizes
BuffaloPlough, a well formed mould board for stiff lands, with cast shares
Double and single shovel Ploughs. ALSO,
Cultivators, with wrought and cast tires
Do do made to expand
Harrows of different sizes and forms
Wheat Fans, from 15 to $35
Corn Shellers of the best patterns
Cylindrical Straw Cutters, 20 inch box, adapted to horse or water power, capable of cutting 75 to 100 bushels per hour, price $75
14 inch box hand power, 45
11 inch do do do 27

And a general assortment of small articles—such as Hay and Manure Forks: Spades; Shovels; Mattocks; Picks; Hoes; Trace Chains; Hames; Straw Knives.—Also, Thompson's superior cast steel Axes, and other Tools, wove Wire for fans, screens, cellar windows, &c.

FIELD SEEDS—Clover, timothy, herds, orchard grass, tall meadow, oat grass seed, and millet seed at lowest market prices—150 bushels prime seed oats.

March 10.

THE FARMER & GARDENER

AND LIVE-STOCK BREEDER & MANAGER.

CONDUCTED BY I. IRVINE HITCHCOCK, AND ISSUED EVERY TUESDAY FROM THE AMERICAN FARMER ESTABLISHMENT, AT $5 PER ANNUM, IN ADVANCE

No. 50. **BALTIMORE, APRIL 14, 1835.** **Vol. I**

☞This publication is the *successor* of the late
AMERICAN FARMER,
(which is discontinued,) and is published at the same office, at five dollars per year, payable in advance.
☞When this is done, 50 cents worth of any kind of seeds on hand will be delivered or sent to the order of the subscriber with his receipt.

American Farmer Establishment.

BALTIMORE: TUESDAY, APRIL 14, 1835.

MULES AND THRESHING MACHINES—An intelligent and indeed eminent farmer of Maryland, told us in conversation a few days ago, that if he was by any means deprived of the use of mules, and of a threshing machine, he would not follow farming another year. We mention it as an illustration of the importance of these articles, to which we think might he added the straw-cutter. This implement is too little known by farmers generally, and is quite as valuable as the threshing machine.

PEACH TREES—The cultivators of the peach tree in New Jersey,—where the business is prosecuted on a very extended scale,—have suffered great loss by the severe weather of the late winter. The following paragraph is from the Woodbury, N. J. paper:

Since our last we learn, from good authority, that in addition to the loss of the peach crop, both the bearing and the nursery trees are destroyed. It is supposed they were killed by the severe frost on the night of the 20th September last. It will require five years time to bring the peach crop to the same perfection it was last summer.

In the vicinity of Baltimore, we hear, the most extensive peach orchards will yield no fruit the coming season, in consequence of the frost.

LOG HALL, Miss., March 18, 1835.

To the Editor of the Farmer and Gardener:—

The season is here peculiarly unfavorable, certainly the most rainy, cloudy, weather I have seen in my recollection—and the coldest winter ever known in this country I think; as a proof I give the fact that a great deal of cane has died I think by some freeze—all the switch cane I have seen, (we call switch cane about the size of riding switches) has dropped its leaves.

Peach trees have not been in bloom 3 days; I have peas about one inch high, generally, I think, they are at this day in bloom; my first planting rotted. The thermomter at my house on the 8th Feburary stood at zero! at 7 o'clock in the morning!

I will give you a few days of our cold weather (on paper). I live near about east of Vicksburg, on a line about 12 miles.

Feb. 3d, at 9 o'clock P. M.—Ther. 22° clear.
4th, 7 A.M. 15°—1 P.M. 35°—10, 25°, clear.
5th, 7 A.M. 18°; 11 A.M. 38°; 7½ AM. 42°; clou-
6th, 9 A. M. 29°. [dy in afternoon.
7th, 7 A.M. 13°—1 P. M. 25°; 5, 12°; 6, 10°;
7, 8°; 8½, 6°; 10, 3°—and on the
8th, at 7 AM. zero; 8, 4°; 10, 19°: 1 P. M. 25°.

Certainly the coldest weather I have ever experienced, altho' I spent 2 years north of you—Our weather is very changeable; at dark to night quite clear—distant thunder, low and murmuring, and now at 9 o'clock, the big drops pattering on the house top—occasionally a bright flash, and wind as if it were to blow up old Æolus himself.

I have known the thermometer to rise 3° in 20 minutes, one day up to 70°, and perhaps the next at freezing.

A storm is brewing and I will stop to meet it.

N. B. What the——(I had like to have said something) has become of your paper, I have not seen one in so long a time, I really forget when.

M. W. P.

[To our correspondent we would remark that the fellow he was about to name, must be in the mails, (if he has left Washington, where he has spent the winter.) The paper alluded to is certainly deposited in the post-office *monthly*, as ordered by M. W. P. Ed.]

CALF STORIES—A writer in a northern paper comes out with the following "pretty considerable" story:

"*Plainfield, N. Y. without a parallel!*—There is now remaining in the town of Plainfield, county of Otsego, a Cow, owned by Aquilla Maffat, having been the mother of *ten calves* in the space of two years one month and ten days. If this is doubted, call on his neighbors. Said cow had four calves on the 2d Jan. 1833; two on the 2d February, 1834; and four on the 12th Feb. 1835. This cow will be five years old some time in the month of April next."

Now this is sufficiently extraordinary, not to say wonderful—but this story sinks into insignificance by the side of the following, and the bold assertion that the Plainfield product is "without a parallel" is found to be "at least premature" as the newsmongers say, for the last Pittsburg Visiter contains the following *interesting* case, which may gain credence among CALVES, but is really a *leetle* too magnificent for bipeds.

"*Mirable dictu!*—A gentleman called at our office and informed us that a cow belonging to Mr. Young, of German township, Fayette county, brought forth at one birth FORTY-ONE CALVES! Before giving publicity to the fact, Mr. Young called in a respectable neighbor to witness it, who counted *forty-one*, and is ready to testify to its correctness. We were informed that the calves were about the size of full grown rats, one only of which is living, and the cow herself is dead."

MARYLAND HORTICULTURAL SOCIETY.

At a stated meeting of the Maryland Horticultural Society held on the 4th April, it was

Resolved, That the Society meet at its room *every Saturday*, at 12 o'clock, in committee of the whole for the purpose of awarding a premium to the persons who shall exhibit the most deserving vegetable, flower or fruit. It is to be understood that the article that receives a premium under this arrangement, will not be entitled to a stated premium at the annual exhibition; and that the vegetable, fruit or flower, must be in itself of a *quality* to entitle it to a premium, so that no single article shall receive it for want of competition merely.

Wm. Benning Llewellyn, American Consul at Salonica, was unanimously elected a corresponding member of this Society.

GIDEON B. SMITH, Cor. Sec'y.

Saturday, April 11—The show of flowers was uncommonly splendid, and attracted much notice. The following plants and vegetables were exhibited.

By Thomas Kehoe, gardener to Col. B. C. H. ward, a bunch of Rhubarb, and a fine head of Lettuce.

By Mr. Peter Nant, a bunch of Asparagus from the open ground; excellent for the season.

By John Feast, Azalea Phœnicia, Chinese tree Pæony, Allysum Saxatile; Cyclamen Persicum; Pelargonum Macranthum; Gloriosa and Fair Ellen; Geranium Macrahison; Eupatorium Grandiflora; Sparmonia Africa; Acacia Armata, &c.

By Samuel Feast, Azalea Phœnicia; Mimulus Smithil, (this is a new and most beautiful plant,) Sohizonthus Porigens; Cassia Elegans; Banksia Lutea; Anthylis Barbajoves; Leptospermum Multiflora, &c.

By Edward Kurtz, Azalea Indica; Azalea Alba; Azalea Cerulea and Azalea Sp.

Several beautiful bouquets of cut flowers were exhibited from Hampton, the residence of Mr. John Ridgely.

The committee of the whole met at 12 o'clock and awarded the premium to Thomas Kehoe, gardener to Col. B. C. Howard, for the head of lettuce, it being of superior quality.

GIDEON B. SMITH, Cor. Sec.

A fault is made worse by endeavouring to conceal it.

THE FARMER.

[From the Farmers' Register.]

A NEW MODE OF CULTIVATING CORN MIXED WITH OTHER CROPS.

For several years I have practised a plan of saving my corn crop, in the execution of which, I consider myself much benefited, viz., in diminishing the labor usually bestowed in preserving that important crop, securing a large mass of excellent forage that would otherwise be lost, and providing the means of making a mass of valuable manure, ("Arator's gold dust, and I find by experience, mine also)—and as you invite communications on agricultural operations, I will give you the detail. In addition, by my mode of cultivating my land, I find that my grain is much superior to my neighbors, who follow the old beaten tract, "the good old way."

Previous to commencing the pursuit of agriculture, I took a course which common sense would dictate in all human pursuits: I read all I could on the subject—reflected much—and observed the practice of practical men, and especially endeavoring to obtain from them the *why* and *wherefore* of all their operations. I pursued the cultivation of the earth because I delighted in it—and consequently I rarely "called on my man Tom," but became the "man Tom" myself, and directed and superintended all the operations of my farm—and among other notions I took up, there was this one, that the man appeared to me ridiculously inconsistent who would follow one pursuit, and try to excel in another; and in addition, such is my natural and acquired disposition, that if I had determined to follow picking up old rags, I would try to excel in it. I had but little business at the store, less at the tavern or grog shop—and at elections I went merely to give my vote. My farm was and is the place that "gives me plenty to do," and to it I gave my time—my bodily and mental exertions principally.

At an early day I adopted as an axiom, that labor wisely directed, would endeavor to secure the best possible return from the earth, for that bestowed on it, and that any mode of cultivating the soil which eventuated in its depreciation, was, and should be with me, inadmissible; and if I could not succeed in a mode of cultivation that would yield me *money-making* crops, and permit my land to be advancing in fertility, I would abandon the pursuit. Fortunately for me, a little arith metical adding and subtracting, made it perfectly evident, that however extravagant the interest I might be getting for the use of capital, yet if that capital was annually depreciating, it was a wretched business.

After forming this opinion, I need hardly add that it was determined by every means in my power, to get into a most efficient manuring system, combining every possible economy and convenience. I bought some good cattle, sheep, hogs, and goats, and found that by a judicious management of them they became a source of profit, and above all, they secured to me the basis of an accumulation of manure. Adopting also a rotation system, I found it added prodigiously to my means for the improvement of my land, and stock, and manure. To preserve in the best manner, every thing that had the semblance of what is called "ruffage," (or offal matters of the farm) consequently became a *desideratum*, and here I put into full operation what is usually termed *economy*.

You could just as soon have found a large full ear of corn lying on the ground around my barn or stables, as a shuck, and equally would you be puzzled to find a corn stalk in my field. "Save all," was my motto. Following up this theory, I soon had large heaps of manure, and had the pleasure of realizing my productive system of husbandry. To arrive at that part of my theory, viz: that the mode of cultivating any given quantity of land that secured to the cultivator the greatest return for the labor bestowed, that the same quantity of land could be made to yield, was the one that sound wisdom would pursue—and certainly the one most profitable. I soon found that a correct system of mixed crops must be resorted to—and to make this mixture judiciously, was an important item in my agricultural course; and to secure the heavy crops or large returns for the labor bestowed, that I had anticipated, I had previously settled that manure must be given to aid in the production of this mixed cropping, as also to secure another of the two great objects which I kept steadily in view, viz: the improvement of the soil. On every view I took of the subject, I was always brought back to this point, and a complete manuring system presented itself uniformly as the key to all successful agricultural pursuit. In the language of that book which contains so many admirable maxims for the wise direction of human life, I went into a system of making manure "with all my might."

In my rotation cropping system, I manure only for the corn crops, and for this one with long slightly fermented, or rather decomposed manure, but heavily. If I can get the vegetable substances which principally enter into the composition of my manure heap, well saturated with the liquid produced by the animal excrement, and plenty of it into the soil, well turned under before any evaporation can take place, all with me is well—no after-cultivation of that crop brings it to the surface during that season. Pursuing the same system, I have each year one shift resting, after which year of rest, this field, going through the following course, has to work out my corn crop. During that year nothing goes on this field—it is a positive rest: and from the quantity of vegetable matter which grows on it, and which ultimately goes into the soil, it is also a year of restoration.

My corn field this year, 1834, was ploughed deep in September 1833, and the mass of vegetable matter then found on it well turned under, and rye sown on and harrowed in—the harrow going with the furrow—half a bushel of seed to the acre. The rye gave me a fine bite for my young hogs, and sows with pigs, and calves, and a few milch cows, from the 15th of November to 15th of February, when every thing was removed from the field. On the first day of April the rye was sufficiently rank, and was well turned in; an honest manuring from my dung-stead having been spread on it previously, and on which also was put a decent coat of swamp mud—and well turned under; which last operation, from the previous management, was not hard to effect.

In spreading the manure at this period, the rank rye was pressed down, and with a well constructed barshare plough, was easily turned under as deep as required. A coat of lime was now given, and which was mixed with the soil by a short wooden tooth harrow—the harrow going with the furrow that turned under the manure, and which prepared the field for being laid off in straight rows, at five feet by three, running the three feet furrows first, just sufficiently deep to mark the ground, and not disturb the manure—the five feet furrow running with those that put under the manure, and as deep made with a half-shovel to receive the seed. In dropping the seed, it was done with care, so as to have the grains as nearly as possible in a row; and with little care after thinning, and permitting only the two best plants out of the three dropped to stand, made the after plough cultivation easy and convenient, the ploughman being enabled, without danger, to run close to the stalk, saving much hoe labor. After the corn was planted, (indeed while planting) a furrow was run in the middle of the rows, into which over one-half of the field rice was dropped thick in the drill, the other half retained for peas to be drilled in the same way. The corn and rice were covered with a small board, attached to a light Scooter plough stock. On the first ploughing of the corn, and which was equally a ploughing of the rice, and the dressing that followed with the hoe, the earth was slightly drawn on the three feet intervals between the hills of corn, on two sweet potato sets, the red or bunch (the latter preferred on account of their having almost no vine) dropped and covered. In the hill of corn, one pindar (pea nut or ground pea) was dropped, and covered also. After drilling the balance of the field, between the rows of corn, in peas, my planting was now finished. It will now be seen, that I had nearly two and a half feet to plough in, or rather stir the ground in, between the rows of corn and rice, and corn and peas, one way of the field.

To prevent premature alarm to your readers, permit me here to say, that my security for success in all those plantings, was the after mode of managing the corn—and which I think, completely exhibits the value of this mode of cultivating land. Here I will anticipate another difficulty with some, viz: the prodigious trouble and labor I was at, in my manuring for this crop; by assuring them, in time, that this manuring was to serve three more years of heavy crops in my rotation system, and for that purpose was found ample.

The ground was well tended—the potatoes grew sufficiently until the corn was removed; the rice also; the pindars and peas were at home.—The ground now easy to plough, or rather stir, (for with me no turning up or over in the hot blazing sun season) from previous management, was stirred with small brisk walking mules, and careful ploughers, before each of whom, a premium for excellence of execution was held up. The hoe hands had the same inducement. The mules were well taken care of, each one and his driver being bound together by the strongest ties of interest—every thing, as well as the ground, was stimulated to struggle for success. In tending, the Scooter was the only plough used.

As soon as the first two or three blades on the

corn seemed to invite the hand of economy to save, I went through the field and stripped and brought them home, throwing them in bulk under a large shed, turning twice over, and in a few days packing away, sprinkled with salt while stowing away. About the time that I found the balance of the blades inviting to a pulling, the shuck on the corn assumed a yellow appearance, and the corn itself had become pretty hard, and I now prepared by one *coup de main* to "save all" —and this I effected as follows. Four strong hands cut the stalk at the ground, each taking two rows, and laying down, evenly, as cut, (viz. the butts;) on going through, they hung their knives in the scabbard, each man gathering his two rows, and placing in heaps along the centre row. About as fast as this was effected, a wagon with low wheels, and long coupled, on which was a frame fitted for the purpose, passing along, taking up the corn, and laying it carefully on the butts together each laver, and passed to the barn lot, which was well ploughed up, and where the corn was put in shocks, shoving the butts into the soft ground while stacking, spreading well at the bottom, putting the stalks of about sixteen to twenty hills to the shock—and let it stand ten days to cure. These small shocks, or stacks, were tied at the top by a wisp of rye straw. This business, as also the cutting, was not arrested by a moderate rain—if any thing, from experience, the latter preferred.

As soon as the field was thus cleared, I proceeded with the Scooter and hoe, and left it in fine order, giving all a last dressing—after which, all the remaining crops grew off rapidly. My corn was admirable, say fifty-two bushels to the acre. By the removal of the corn, the remaining articles had full and fair play, and as much room as they required, on such land as they were now found in. It must also be recollected, that about the time the corn was removed, was the usual time for potatoes and rice to grow off, as also the pea crop. The rice was cut in the usual time: it could not have been exceeded—having so much room after the corn was taken off, forty some odd bushels of shell rice were made to the acre. The potato hills universally cracked open—they were superior, and the pindars as usual. The bunch and red potato, produced by this mode of management, remarkably well, fillingthe ground around the hill, and finding the earth containing so much food for their roots, they spread astonishingly. There appears to be no interference between the pea and potato vines, judging from production, although such near neighbors. Better peas or rice I never made by any other mode of planting. The pea crop I save by pulling up the the vines, and curing in the fields, carrying home and putting in rail pens, sprinkling with salt as packing away—a good floor to the pens preserves the salt.

The prodigious advantage I derive from the stalks of corn saved in this way, as also the shuck, will be best understood by a communication in the Baltimore Farmer, to which I beg leave to refer, and which use of those parts of the corn crop amply compensates for a little shrinkage in the grain, if any. The manure heap fully settles the account, as also some fine steers, sold annually in the form of work oxen, a few pair of which I have trainnd to labor on arriving at the age of two years, and which article of sale I find goes off readily. The mass of offal I have from a twenty acre field, planted and tended in this way, is incrediole, in stalks, shucks, fodder, peas, and pea vines, rice straw, and lastly, potato vines—and each, saved in my way, of superior quality. In addition, the advantage to the soil of being so much shaded during the intense summer heat, and the return of the pindar vines, and the rice stubble, and potato vines, if not cut up and carried home and fed away. The potatoes I dig up with a three pronged hoe folk, carry home and feed away to my fattening hogs, who are by this time in a dung-stead of their own, yielding by being well littered, a rich contribution of the "gold dust." The pindars, and balance of the potato roots, go to the sows with pigs, young hogs, &c., —if a mast year, putting them in at night and out in the morning—if no mast, putting them in all day, and penning on plenty of leaf litter during the night, and which makes them count something in the way of the next crop.

My corn remains ten or twelve days in shock, then stowed away under sheds, in barns, &c.— For the after management, I beg leave to refer to the paper before alluded to.

It is on the succeeding crop, that my trouble, as it is called, will show itself, and which you can have if desired, from AGRICOLA.

Clarke County, Albama.

Millet.

Mr. Pritts—Wheat and Rye, for the last two years, have not been more than half a crop. Hay has been the only profitable crops we have had in this county, for the last two years. Many of our farms, however, will not produce a profitable crop of timothy; on such farms, no crop would be more profitable than *Millet*. If cut before it is *fully* ripe, all writers agree, that it is equal to timothy for hay—and such is my experience;—I have now some of the hay, which I have shewn to some of our best farmers, who think, from its appearance, that it is equal to timothy. It is eaten by my horses, mules and cows, with as much avidity as they could eat timothy.

I made, last summer, an experiment with millet, which, whilst it was in progress, called forth the smiles of some, who seemed to think that a *Lawyer* could not know any thing about farming, but which has been so successful, that I am anxious to communicate it to our farmers. I had never seen a crop of millet growing, and notwithstanding the prejudice against it, in this county, had, from my reading, formed a very favourable opinion of it, and thought I would judge from my own experience. From the 1st to the 10th of May, seemed the usual time for sowing. The latest I had read of, was the 5th June—usually ripe from 1st of August till the 1st of September. For several reasons, which it is unnecessary to detail, I thought the 1st of July would be time enough to sow, and that it would get ripe before the ordinary time of our having frost. About the last of June I mowed a field of clover, blue grass and timothy, (growing on limestone land):—I wished to put in wheat, in the fall, a part of it. I thought if ploughed then, as is the custom of our farmers, and permitted to lie exposed to the sun till the 1st October, the ground would be more impoverished by the sun, than it would be by a crop of millet. I therefore ploughed about the 1st of July, 1834, two acres of it—harrowed them— and on the 7th of July, sowed on the two acres, one bushel and a half of millet seed. Our farmers will recollect that they have seldom experienced a drier season than we had last year, from the 1st of July till about the 1st of October. On the 20th of September, I cradled the millet—the lower ends of the heads not ripe—the blades quite green—commencing to cut after the sun had dried it—let it lie in the swath till next day— then bound it in sheaves of the size of those of wheat—hauled it in immediately—the weather being brittle—threshed it as hauled in—too damp and threshed badly—my hands thought that not more than one half the grain was threshed out— certainly not more than two thirds. Produce, forty-two and a half bushels of seed and at least three tons of hay. If but two-thirds of the seed was threshed out—the produce would be sixty-three bushels of seed and three tons of hay. Others have raised more than two tons of hay to the acre. As soon as the millet was cut, I ploughed the ground—found it in fine order, and sowed it in wheat.

Now to the practical result: instead of letting the ground, when ploughed, lie all the summer exposed to the sun, I harrowed it, and sowed on it one bushel and a half of millet seed. The seed cost three dollars—the expense of harrowing and sowing, any farmer can calculate. The crop raised, at the very least calculation, was worth sixty dollars.

If our farmers will, as soon as they cut their clover fields, plough them down and sow them in millet, they will *gain* one crop, and that a most profitable one. I hope the "Guilford Farmer" will make the experiment.

JOSEPH CHAMBERS.

Chambersburg, March 18, 1835.

Interesting to Farmers.

The following is a short history of the origin and process of the application of Plaster of Paris, as a manure; which it may be important to the agricultural interest to publish.

"The first discovery of the utility of Gypsum or Plaster of Paris, for agricultural purposes, was made by a laborer engaged in pounding plaster near Hilburn, in Germany. He noticed the extra growth of the grass along the ronte, which he at different times travelled, across a meadow: supposing it to be occasioned by the fine plaster dropping from his clothes, he was induced to try an experiment, to determine the point; it succeeded beyond his expectation; and others tested its usefulness, until all became satisfied of its nutritious qualities, and thus the use of Plaster in Germany, became general, as a manure, whenever it could be obtained.

In the year 1798, Jacob Barge, of Philadelphia, having learned the use of plaster in Germany, obtained some from a manufacturer of Burr stones, and scattering it upon a field of clover, which proved perfectly satisfactory; in consequence of which, Messrs. Hocker, Lancaster, Clifford, and

David Deshler, all respectable farmers, near Philadelphia, used the plaster in various ways, and for different plants, and were all equally well satisfied of its utility. The call for, and application of, the article increased, and hence the commencement of a regular trade upon the seaboard, in the transportation of plaster from Nova Scotia, to all the southern ports; which has regularly increased, from that period to the present time; and which has become a business as regular and permanent as any other in the U. States.

The directions for application of plaster, are so various and multiplied, that it is believed no certain general rule can ever be adopted; for it has been found that, on some grounds, one bushel to the acre, is better than six bushels; two to the acre, however, appears to be the quantity required for the largest portion of the lands in Pennsylvania. No one should be discouraged, if no preceptible benefits should result from a trial the first year; for it has been found that the more slow it is in its effect, the more certain it is to be advantageous in two, three, or four years after its application. For clover, grass, &c., it should be sown over the field just before or after the grass or clover begins to grow in the spring. It is used in the same manner upon wheat, barley, oats, and buck-wheat grounds.

Another mode for grain of all kinds, is to wet the grain thoroughly, and then mix as much dry plaster with it, as will adhere to the kernel, and immediately strew and harrow in. For corn, throw upon each hill a small table spoon full, as soon as the leaves are formed. For the various experiments made in the eastern states, the fact seems to be well established, that a certain quantity of plaster used upon all dry soils, and on low grounds in dry seasons, is of the utmost importance, and adds greatly to the growth of every kind of vegetable substance intended for the use of man or beast. The only sure direction therefore of using the plaster, is, for each person to ascertain, by experiments, the quantity required for the particular parcel or kind of ground, which it may be desirable to enrich or fertilize. On very dry grounds, it may be advisable to wet the grain and mix plaster, as above directed, and after harrowing, to strew on the top of the ground thus sowed, in a damp day, about one bushel to the acre."—*Ohio State Journal.*

Good Farming.—The following story is finely illustrative of the excellence of good tillage:—

Grocheus, in his book concerning vines, relates that he had often heard his father tell of a certain Parius who had two daughters, and a farm planted with vines. Of the farm he gave one third part as a marriage portion to the man who wedded his eldest daughter, and notwithstanding received as much produce as before from the two thirds which he reserved for himself. Afterwards on the marriage of the youngest daughter, he gave away the half of the remaining land, and found his income still in no way diminished. What concludes he from this? but that the third part of the farm was at length better cultivated than the whole used to be before!

A little neglect may breed great mischief.

THE BREEDER & MANAGER.

[From the London Lancet.]

DR. YOUATT'S VETERINARY MEDICINE.

LECTURE XIV.

DISTEMPER, OR NASAL CATARRH IN THE DOG, CONTINUED.

Prognosis.—The duration of the disease is altogether uncertain; it sometimes runs its course in five or six days, and it may linger on two or three months. In some cases the emaciation is rapid and extreme: danger is then to be apprehended. When the muscles of the loins are much attenuated, or almost wasted, there is little hope; and although other symptoms may remit, and the dog may be apparently recovering, yet if he continue to lose flesh, we may be perfectly assured that he will not live. On the contrary, let the discharge from the nose be copious, and the purging as violent as ever, and every other symptom threatening, yet if the animal gain flesh, we may confidently predict its recovery.

Chorea.—When the dog is much reduced in strength and flesh, a spasmodic affection or twitching of the muscles will sometimes be observed. It is usually confined at first to one limb; but the most decisive treatment is required, or these spasms will spread from limb to limb, until the animal is unable to stand; and while he lies, every limb will be in motion, travelling at the rate of twenty miles an hour, until the animal is worn out, and dies of absolute exhaustion. When these spasms become universal and violent, they are accompanied by dreadful moans and cries.—These moans are probably not at first those of pain; for if the attention of the animal can be engaged, or if his master or mistress, or his favourite among the family, is present, he will for a while, and for a long while too, be contented and quiet, at least at the commencement of this querulous stage; but it indicates a degree of irritability, against which the robustest constitution cannot long maintain its ground, and cries almost involuntary soon succeed, until they are uttered unconsciously, and the animal becomes insensible to surrounding objects, and also, we would hope, insensible to pain. After the disease has apparently been cured, and even although the attack may have been slight, these twitchings will occasionally appear, confined to the lower jaw, or to one fore-leg, or to both of them. The life of the animal is not in danger, nor is there fear that the disease will return; but this nervous affection is with difficulty removed, and the dog is generally useless for every sporting purpose.

Distemper in the Greyhound.—In the greyhound the disease assumes a peculiar form.—There is no discharge from the eyes or nose; no cough, no fever, no convulsion, no purging, but he wastes more or less rapidly away; his eyes have a peculiar sunken appearance; he lies listless all day long; he obstinately refuses his food, and his belly is strangely tucked up. This continues three weeks or a month, until he is a walking skeleton; then twitchings appear, usually in one of his fore-legs; they rapidly spread; the whole frame becomes convulsed; and death closes the scene.

Yellowness.—In the pointer and the hound, and particularly when there is little discharge from the eyes and nose, an intense yellowness suddenly appears all over the dog; he falls away more in twenty-four hours than would be thought possible; his bowels are obstinately constipated; he will neither eat nor move, and in two or three days he is dead.

Eruption.—In the pointer, hound, and greyhound, there sometimes appears on the whole of the chest and belly a pustular eruption, which peels off in large scales. The result is usually unfavourable. A more general eruption, however, either wearing the usual form of mange, or accompanied by minute pustules, may be regarded as a favourable symptom. The disease is leaving the vital parts, and expending its last energy on the integument.

Examination after death.—The post-mortem appearances are often exceedingly unsatisfactory. To a certain extent they correspond with the original character of the disease, but more with its strangely-varying subsequent symtoms: yet I never saw a case in which, whatever might have been the character afterwards assumed, I could not trace the tissue which was first affected.—There has always been redness, inflammation of the Schneiderian membrane, generally ulceration, on one or both sides, confined to the central meatus, spreading over the nasal cavity, involving particularly the superior part of the septum, eating through it, and every cell of the face and the head filled with purulent matter. I have sometimes fancied that on the upper portion of the septum, or cartilaginous division of the nostrils, I have seen numerous small miliary tubercles. The ulceration has sometimes extended into the fauces, but has rarely penetrated into the trachea. I have never seen it in the bronchial passages. If the dog has died in fits, we have inflammation of the brain or its membranes, and particularly at the base of the brain, with considerable effusion of a serous or bloody fluid. If the prevailing symptoms have led our attention to the lungs, we find inflammation of the bronchial passages, or, in a few instances, inflammation of the substance of the lungs, or the submucous tissue of the cells.—We rarely have inflammation of the pulmonary pleura, and never, to any extent, of the intercostal pleura. In a few lingering cases, tubercles and vomicæ of the lungs have been found.

If the bowels have been chiefly attacked, we have intense inflammation of the mucous membrane, and, generally speaking, the small intestines are almost filled with worms. If the dog has gradually wasted away, we have contraction of the whole canal, including even the stomach, and sometimes considerable enlargement of the mesentric glands. The abdominal viscera, however, rarely present any remarkable morbid appearances.

Nature of Distemper.—The distemper is clearly a disease of the mucous membranes, usually commencing in the membrane of the nose, and resembling nasal catarrh. In the early stage it is *coryza*, or nasal catarrh; but the affection rapidly extends, and seems to attack the mucous membranes generally—determined to some particular one, either by atmospheric influenee or accidental cause, or constitutional predisposition. The fits arise from general disturbance of the system,

or from the proximity of the brain to the early seat of inflammation.

Treatment. No Specific.—My account of the treatment of distemper will, I fear, be unsatisfactory. One thing, however, is clear; that for a disease which assumes such a variety of forms there can be no specific; yet there is not a keeper, and there are few gentlemen, who are not in possession of some supposed infallible nostrum. Nothing can be more absurd. A disease attacking so many organs, and presenting so many and such different symptoms, must require a mode of treatment varying with the organ attacked and the prevailing symptom.

The faith in these boasted specifics is founded on two circumstances—atmospheric influence and peculiarity of breed. There are some seasons when we can scarcely save a dog; there are others when we must almost wilfully destroy him in order to lose him: and there are some breeds in which, generation after generation, five out of six die of distemper, while there are others in which, generation after generation, not one out of sixteen dies. When the season is favourable, and the animal, by hereditary influence, is not disposed to assume the virulent type of the disease, these two important agents are overlooked, and the immunity from fatal result is attributed to medicine.—Many gentlemen have told me that they could cure distemper better than I could; that a twelvemonth has passed, and they have not lost a single dog, and I, for a while, have lost them; but in a few years they have applied to me in great distress, complaining that the distemper was sweeping off the very pride of their kennel, and that they could not stay its ravages. We may be assured that there is and can be no specific in a disease like distemper. The circumstances most connected with our success will be the recollection that it is a disease of the mucous surfaces, and that we must not carry the depleting and lowering system too far. Keeping this in view, we must accommodate ourselves to the symptoms as they are.

Emetics.—The first medicine to be administered is an emetic. It will often cut short this disease, as it will also some other maladies of the dog. There is scarcely any type of disease in which some affection of stomach is, if not a primary, yet an important link in the chain of morbid sympathies. Disinclination to food is an early—a general symptom. I have heard of many a case in which fever has been at once vanquished by the exhibition of a smart emetic. At all events we clear the stomach of its noxious contents, and that is a great thing; and we break through, and having done that, for ever get rid of a sad series of morbid associations. From the peculiar construction of the cardiac orific of the stomach of the horse, the act of vomiting can rarely, or without violent efforts, be produced, and it is not easy to produce vomiting in the ox; but the natural medicine of the dog seems to be an emetic. The act of vomiting is very easily excited in him, and, feeling the slighest ailment, he flies to the dog grass, unloads his stomach, and is at once well.—Common salt will do when nothing else is at hand; but the best emetic, and particularly in distemper, consists of equal parts of calomel and emetic tartar: from half a grain to a grain and a half of each will constitute the dose. This will act first as an emetic, and afterwards as a gentle purgative. Then, if the cough be urgent, and there be heaving at the flanks, and the nose be hot, a moderate quantity of blood may be taken; from three to twelve ounces; and this, if there has been previous constipation, may be followed by a dose of sulphate of magnesia, from two to six drachms. In slight cases this will often be sufficient to effect a cure.

Difficulty of treatment.—Should not this succeed, the treatment of distemper is not a little puzzling. There is one consideration, however, which will generally guide us through the labyrinth. It is a disease of the mucous membranes; that which most of all requires early and decisive measures. They are but a few golden moments which we often have in acute inflammatory affections of these membranes.

Is there Fever?—Then we examine is the huskiness considerable? the nose hot? the eyes red? the flanks heaving? the pulse accelerated?

Pulse.—There is some difficulty, however, about this latter symptom. The pulse of the dog differs materially in different species, and in different breeds of the same species. In the Newfoundland dog it is about 60—in the small spaniel more than 100. We can feel the pulse on the left side, or on almost any part of the radial artery.

Bleeding.—If these indications of fever are found, bleeding will be necessary. The quantity to be taken will vary according to the degree of fever; it should rarely be less than a quarter of an ounce to every pound that the animal weighs; and it may safely, and should often, be carried to double that quantity. Where there is not much affection of the respiratory organs, the blood will be most conveniently taken from the jugular. A ligature should be passed round the neck about half way down it, when the vein should be sufficiently prominent. The small lancet of the human surgeon should be used, but never the fleam of the farrier. In a large dog it will be necessary to retain the edges of the wound together by the insertion of a pin; in the smaller dog there will be rarely any bleeding after the ligature is loosened.

Should there be much difficulty of breathing, a ligature around the neck will produce a sense of suffocation; and I knew one valuable dog that was strangled before the tape could be untied.—In such cases blood may be abstracted, although in a much smaller stream from the radial artery. The leg must always be bound up for twenty-four hours after the bleeding, otherwise the muscular action that will be going forward will frequently produce renewed hæmorrhage.

Physic.—Having bled, you will give a dose of physic. Epsom salts, in substance or in solution, will be the most convenient, as well as the most effectual. From a drachm to half an ounce will be the requisite dose. The salts will remain on the stomach, when calomel of aloes would be rejected. Equal parts of castor oil and syrup of buckthorn will form a good aperient here.

Medicine.—We must now think of sedative medicines to assist in lowering the action of the heart and arteries, especially considering the nature of the disease with which we have to contend, if prolonged, invariably assuming a typhoid form, and likewise assuming it if depletive measures are pushed too far, or the powers of the constitution too rapidly undermined. We may bleed copiously in the first instance, yet cautiously afterwards, and violent purging we must not produce, for the distemper diarrhœa is with the utmost difficulty stopped.

Digitalis.—Here again we have first recourse to digitalis. I can speak with confidence of its effect on the dog, and of that effect being most directly produced on the heart. Not many doses of digitalis will be materially lessened, but lessened in a peculiar manner—not in every part of the circle, but there will be suspension. The pulse will beat one, two, three, and stop while one and another pulsation might have been counted. An intermittent pulse is regarded as unfavourable in many cases, but it is the best of all symptoms here, and if we can establish it by the exhibition of digitalis, we may regard our patient as safe. If digitalis ever fails of producing this effect in the dog or the horse, it is when vascular depletion had not been previously employed, when the disease wore a character so dubious, that we did not dare to use the lancet. The vital current being first diminished in quantity, the digitalis takes up the action, and speedily subdues the irritability of the heart.

When certain suspensions of the action of the heart are produced, there must be less fluid circulated, and less sent to the inflamed mucous surface, and in proportion to the length of the intermission will the heart have time to return to its regular beating. While the number of pulsations is diminished, their quality is as much altered.—The pulse becomes softer. The digitalis being suspended when the intermittent pulse is once established, the action of the heat soon assumes its natural healthy character.

Antimonial Powder.—To digitalis I should add, not emetic tartar, but another, and a very excellent preparation of antimony, the pulvis antimonialis. Indisposed as I know some veterinary practitioners are to admit its power, and lowly estimated as it is by some human surgeons, I have no hesitation in recommending it to you as a very efficient diaphoretic. I will not say that it produces profuse perspiration in the dog. I know not the medicine that will accomplish this in the dog; but the insensible perspiration seems to be increased, and if I can produce this determination of blood to the skin, and increase the action of the exhalants of the skin, and thus lessen the quantity of the circulating medium, I am producing a very important effect. Gentlemen, I am purposely dwelling here, because it is the first serious disease of the dog of which I have had occasion to speak, and the first time I have had opportunity to recommend these medicines so important in the treatment of every febrile affection in the dog.

French silks—It is stated that the city of Lyons alone annually sends to the American market, manufactured silks to the amount of $12,000,000.

An English writer says, that Englishmen are on the average one inch taller than Frenchmen, and Americans one inch taller than Englishmen.

THE GARDENER.

[Extracted from Loudon's Gardener's Magazine for January, 1835.]

NOTICES OF THE NEWEST AND BEST FRUITS AND VEGETABLES.

The information respecting the fruits was chiefly furnished by Mr. Thompson and Mr. Barnet of the London Horticultural Society's Garden; that respecting the vegetables from other sources, with a few researches and translations by the Editor of the Horticultural Register.

Cabbages.---Early dwarf Russian; the dwarf Portugal; as an article of luxury the new Russian dwarf Broccoli is said to be one of the best sorts.

Peas.---Knight's new green tall Marrow; Knight's green Marrow; Early Warwick; D'Auvergne pea, synonyme D'Auverigny, is excellent, very productive, was sent to London Horticultural Society by M. Vilmorin of Paris. An account of it was publishnd in the Bon Jardinier for 1832, page 269, and in the Transactions of the London Horticultural Society for Jan. 1834, where may also be found a description of M. Vilmorin's Sugar pea, stated as deserving of cultivation.

Kidney Beans.—Painted Lady Runner—blossoms beautiful scarlet and white, very prolific, not so tall as common scarlet runner. The scarlet long pod is an improved variety.

Carrots.—The purple skinned and white skinned are novelties, but more articles of curiosity than value.

Turnips.—Three sorts new to English Gardens and of excellent quality.

1st. Navet blanc plat hatif (Early flat white Turnip)—Small, flat, excellent flavour, come in a week earlier than the Early Dutch.

2d. Navet rouge plat hatif (Early flat red Turnip)—Not quite so flat as the former, nor so early by a week; the part above ground of a dull purplish color. The seeds of the above may be obtained from M. Vilmorin, Paris.

3d. Black turnip—A valuable summer and autumn variety, rather larger than the Early Dutch; globular, very firm, the outside skin dark brown, inside white; very hardy and remains long in perfection. It was sent to the Horticultural Society by Messrs. Both of Hamburg. The writer cultivated this turnip more than twenty years ago, from seed received from a friend in Germany, where it has long been known.

Potatoes.—The forty fold Potatoe, is very prolific, and said to be extremely mealy and well tasted.

Oxalis crenata is much talked of, but does not appear to increase in public estimation.

Radish.—Radis rose demilongue (medium size rose radish) is a very superior variety lately received from Paris. It is of a fine bright scarlet color, an intermediate sort between the long and round rooted variety. Early, very productive, of excellent quality, and remains longer in perfection than any of the long rooted varieties; it is well adapted for growing in frames.

Celery.—The Italian and Kentucky are recommended as the best.

Apples and Pears.—Almost all these sorts, and many other more valuable for this climate, may be found in the new American Orchardist, by W. Kenrick of Newton, or in the first number of our Resister, pages 7 and 8.

Peaches.—For a small collection to ripen in the following order: Earliest, Early Ann, Malta; next, Double Montagne, Royal Charlotte; Noblesse, Royal George; next, Grosse Mignonne, Barrington; latest, Bellegarde, Late Admirable. Should any of these not agree with the soil, others may be introduced, as the Acton Scot, Spring Grove, Mountaineer, which are probably hardier. The best varieties for forcing are Bellegarde, Grosse Mignonne, Royal George and Barrington.

Nectarines.—None are so good as Elrudge and *Violette Hative* (Early Violet.) Hunt's Tawney is considerably earlier than these; and for a later sort the Late Yellow deserves notice. In a warm soil and favorable situation the new White Nectarine will produce fruit which will not only form a beautiful contrast in the desert, but will also be esteemed for its excellent flavor.

Apricots.—Red Masculine, Large Early, Royal Moor Park, Brada, Turkey, and Orange; this last is the best for preserves.

Plums.—Drap d'Or, Green Gage, Kirke's Washington, Reine Claude, Violette, Coe's Golden Drop, Blue Imperatrice, Coe's Fine late Red, Early Orleans, Shropshire Damson, Diamond, and White Magnum Bonum.

Cherries.—For standards, May Duke, Royal Duke, Late Duke, Black Eagle, Elton, Downton, Knight's Early Black, Black Tartarian, Morello, Kentish. The earliest cherries are Early Purple Guigne, Werder's Early Black Heart, May Duke, Knight's Early Black, Bowyer's Early Heart; the latest are Late Duke, Florence, Bigarreau Tardif de Hildesheim, (late Bigarreau of Hildesheim,) Morello.

Gooseberries.—The best early reds are the small dark Rough Red, Keen's Seedling, Later Red Champagne, Warrington and Red Warrington, Yellow Early, the Early Sulphur Yellow Champagne is later. Green, Early Green Hairy, later, Massey's Heart of Oak, Pitmaston, Green Gage, this is deserving peculiar notice, in some seasons it will hang till it shrivels and almost candies on the Tree. Whites,—Taylor's Bright Venus is of an excellent flavor; Woodward's Whitesmith, and Crystal. The earliest sorts are Miss Bold, Wilmot's Early Red, Green Walnut, Early White. Late sorts—Leigh's Rifleman, Bury Farmer's Glory, Farrow's Roaring Lion, Late Green, and Cook's White Eagle. The best large sorts are reds, as the Roaring Lion, Top Sawyer, Crown Bob, and Wonderful. Of the Yellow, the largest are Gunner, Rumbullion, and Piggott's Leader. Of the green, Bumper, Peacock, White Eagle, and Ostrich.

Currants.—Best black are Black Naples and Black Grape; best red are Red Dutch, Knight's Large Red, Knight's Sweet Red, Knight's Early Red, Wilmot's New Red, exhibited last summer at the London Horticultural Society is the largest berried variety known. Best White is the White Dutch.

Raspberries.---Best reds are Barnet, Antwerp, and Double Bearing Yellow; Yellow Antwerp.

Strawberries.—*Scarlets*—Old Scarlet, rather shy bearer, but the earliest; Grove End Scarlet is an abundant bearer; Roseberry, adapted for forcing; Gomstone Scarlet, Black Roseberry, American Scarlet, and the Coul late Scarlet which does not ripen until all the other sorts are over. *Blacks*—The Downton, excellent for preserving; Elton Seedling, great bearer, ripens late. *Pines*—Keens' Seedling is the best of all for general cultivation; Old Pine, Myatt's Seedling is a shy bearer, but with so very high a pine flavor that when Keens' Seedling sells in Covent Garden Market at sixpence per pottle, Myatt's Seedling fetches three shillings for the same quantity; it generally bears two crops each year, the last ripening in the early part of November. In consequence of this the plants soon exhaust themselves, so that they cannot be depended on either for duration or erop. Knevett's Seedling is large, prolific and very high flavored. Wilmot's Superb is very large. *Hautbois*, prolific and large flat. *Green*—The Green Pine. *Alpines*—Red, White, Redwood and Whitewood.

Filberts.—The Red and White Filbert, the Cosford Nut, and the Cobnut is the best.

Pine Apples---Queen, Moscow Queen, Black Jamaica, Brown Sugar Loaf, Ripley, St. Vincent, Black Antigua, this should be cut as soon as it begins to turn yellow, or it will lose its richness. Enville, Lemon Queen, White Providence, Trinidad; this last is the largest grown, being reported to weigh sometimes 26 lbs.

Vines.---To plant against a wall of a southern exposure—Early Black, White Muscadine, Grove End Sweetwater, Pitmaston White Cluster, White and Black Sweetwater, small and large Black and White Cluster, Black Esperione. For early forcing in a Vinery, the preceding, or the Esperione Black Prince, Cambridge Botanic Garden Grape, White Mascadine, Royal Mascadine, White Sweetwater, White Frontignan, Grove End Sweetwater, and Red Frontignan. Some new varieties of grape have lately been raised by Mr. Williams of Pitmaston, and the fruit exhibited at the horticultural Society in October, 1834, which promise to be hardy and high flavored. Money's Hardy Muscat or Eshcolata seems to deserve trial. A very dark variety of Black Hamburg in the Lewisham Nursery, Messrs. Wilmot's, produces fruit which, on account of its color, sells a little dearer than the common Black Hamburg. We expect soon to be able to announce a very superior variety of Winter Grape as introduced from Belgium.

At the meeting of the Caledonian Horticultural Society, Sept. 4th, were exhibited a seedling Plum, raised by the gardener of Robert Bruce Dundas, nearly allied to the Green Gage, but ripens on standards; two excellent seedling peaches, raised from the kernels of American kinds by the gardener of the Earl of Dunmore.

At the meeting 16th Sept.—A seedling apple and a seedling pear were shown, both considered promising; and a small branch of the Bursut apple, studded with fruit, was sent by Mr. Gorrie; the tree was dwarfish and produces numerous clusters of fruit. At a subsequent meeting two seedling apples were exhibited, one raised by crossing the Golden Pippin with the Scarlet Nonpareil, the other from the pips of the Doonside. J. E. T.

EVER-BEARING RASPBERRY.—The following account of this rare plant is taken from a note of

N. Longworth, Esq. to the Cincinnati Chronicle:—

"In the latter part of October, 1832, I met in a garden in Warren county, (among the Shakers) with raspberry plants, in full bearing, and on inquiry learned that they were a native fruit of the State, found near Lake Erie.

The fruit resembles the common native black raspberry, but it is larger and finer. I introduced a few roots into my garden, and find them constant bearers from June until destroyed by frost. The fruit is produced in large clusters; the wood continuing to grow through the season, and the ends of the new shoots throwing out fresh blossoms. It is more decidedly a constant bearer than any kind of fruit I have seen. Our monthly strawberries are abundant bearers in June, but for the balance of the season their produce is so small as to be scarcely worth the trouble of gathering. The Raspberry is a constant and abundant bearer, except for two months in the summer, when if the weather be very hot and dry, the produce is less."

MISCELLANEOUS.

[From the Cultivator.]

BOOK FARMING.

We have been told of the following facts, and have only to regret that the like to them are not of more frequent occurrence. A number of intelligent farmers, residing in a neighborhood, somewhere, we believe, in Dutchess county, concluded to form a farmer's association,—to make a common stock of their knowledge and observation,—believing that knowledge, like money, would be productive in proportion to the capital. It was known that A. raised the best horses, and got the best price for them; that B. was far more successful in his wheat and corn crops than his neighbors; that C. reared the finest neat cattle, and kept the best cows and oxen; that D. excelled in sheep husbandry; and, in short, that some individual excelled the rest in a particular branch of husbandry. Each possessed not only some excellence, but some glaring defect in his management. Thus the farm stock of one were sickly, and many died, because the owner did not know how to manage them; another's farm had become dreadfully impoverished, from neglecting the manure, and from close cropping; while the farm of a third was neither fit for plough land, or for sweet grass, on account of the water which every where saturated the soil, and rendered it poachy, cold and sour. Unlike too many now a days, each of these men was conscious he could learn much from his neighbor's practice, which would enable him to manage his farm with more profit—and that he could teach his neighbors something in return. These expectations were amply realized; but as the members lived somewhat remote, it struck them that it would save much time, and be a more sure way of rendering the improvements of all available to each, if they were to write down their practice in the particular branch in which they respectively excelled and the principles, or science, upon which that practice was based. This was accordingly done; and for their mutual convenience, as well as for the benefit of others, the whole was printed, and these men were afterwards denominated, by some of their envious neighbors, *book-farmers*, because they took their instructions from a *printed book*. This did not disturb them: for they got from their book the secrets by which the others had excelled in their particular department, and each profited by the good management of his neighbors. The consequence was, that all gained by the interchange.—The defects of all were speedily remedied, and in a few years prosperity crowned their labors; and they now exhibit, we are told, the best models of profitable farming any where to be found in the land; and they enjoy the felicity of reflecting, that while they have greatly benefitted themselves and their families, they have, by their example and instruction, done much good to others. They have afforded a fair illustration of the advantages of book farming, when combined with intelligent practice.

Were this example extended to the farming community of our country, how greatly the work of improvement would advance, and the comforts of the human family be multiplied: were each to contribute his mite of practical knowledge, in the branch in which he most excels, what a treasure of information woud be collected, to guide us in our practice, and to stimulate us to habits of industry. And do we not already possess, in a considerable degree, these precious advantages? What are our agricultural journals, but a record of instructions, by the best farmers of our own and every other country—a detail of the methods by which they have succeeded—have excelled—in the various departments of husbandry? There is not a man in the community who may not profit, in some degree, by the teachings of these journals. The self-wise are ever the most profoundly ignorant; for as we advance in knowledge, we become more and more humbled by the consciousness of our comparative ignorance.

We beg that the readers of the Cultivator will take this matter into serious consideration, and remember, that an obligation rests upon them individually, to requite the favors which they are monthly receiving from others, by communicating whatever of their practice that may promise to be beneficial to their brother farmers.

KNICKERBOCKER PICKLE.—The following has been handed us by an old housekeeper; who assures us that it is one of the best receipts that was ever given to the public. We give it for the benefit of heads of families.

Receipt for pickling one hundred weight of Pork, Hams, Beef, &c.—Take 6 gallons of water, 9 pounds of salt, half coarse, half fine, 3 pounds brown sugar, 1 quart of molasses, 3 ounces of salt petre, 1 ounce of potash—boil and skim them well, and when cold pour it on your beef, rub your beef with fine salt. Put the above ingredients into a clean pot or kettle, and let it boil, being careful to take off the scum as it comes to the surface. When the scum ceases to arise, take the liquor off and let it sand until it is cold—then having put the meat you want to preserve into the vessel you intend to keep it in, pour the liquor over it and let it stand.

A smart reproof is better than smooth deceit.

MATRIMONY.—The following beautiful extract is from "Family Lectures," by Mrs. N. Sproat of Taunton, Mass.:—"A great portion of the wretchedness which has often embittered married life, I am persuaded, has originated in the neglect of trifles. Connubial happiness is a thing of too fine a texture to be handled roughly. It is a plant which will not even bear the touch of unkindness, a delicate flower, which indifference will chill, and suspicion blast. It must be watered with a shower of tender affection, expanded with the glow of attention, and guarded with the impregnable barrier of unshaken confidence. Thus nurtured, it will bloom with fragance in every season of life, and sweeten even the loneliness of declining years."

CANADIAN SPRING.—The trotting matches which were to have taken place on the ice yesterday, were in consequence of the depth of snow on the river, postponed till to-day, and a course of two miles, cleared by a sort of Russian Plough, which throws the snow on each side leaving a clear road in its progress.

The trotting matches came off to-day between 11 o'clock and noon; the ice, viewed from the battery, presented an animated scene. We were unable to attend on the course, and have not yet learned the particulars, but understand that they afforded excellent sport. Doctor Caldwell's horse was the winner.—*Quebec, March 24.*

American Nankeen.—We call the attention of merchants and others to the advertisement of Nathaniel F. Williams, Esq., in our paper of to-day. We speak from experience when we recommend the *American Nankeen* as a superior article for gentlemen's wear. It differs from the imported article in improving by use, the color brightens, and the whole appearance of the native article acquires additional beauty by washing. We have had the American Nankeen in use two years, and it now looks better than it did when first made up. —*Kent Bugle.*

Excerpt from John B. Derby's political reminiscences.—"At an age, when I ought to have laid the foundations of future independence, I find myself depressed in spirit and impoverished in circumstances. Yet my example may be incalculably beneficial to the generations who follow.—Let the young men learn, that any useful occupation is infinitely better than politics or preferment; —and that a reliance on *men*, in their political attachment, is but leaning upon a broken reed; while principles, both in politics and morals, are unbending and eternal. * * * * *

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Mules and Threshing Machines—Peach trees injured by the winter—The winter in Mississippi—Calf Stories—Proceedings of the Horticultural Society—Corn with other crops—Millet—History of Plaster of Paris—Effect of careful Cultivation—Distemper in the dog, continued—French Silk Imported—Stature of different nations—Newest and best Fruits and Vegetables—Ever bearing Raspberry—Book Farming, its true Character—Knickerbocker pickle for meat—Connubial Happiness—Canadian Spring—American Nankeen—Miseries of politics—Prices Current—Advertisements.

BALTIMORE PRODUCE MARKET.

☞ *These Prices are carefully corrected every* MONDAY.

	PER.	FROM	TO
BEANS, white field,	bushel.	2 00	2 50
CATTLE, on the hoof,	100lbs.	6 50	7 00
Slaughtered,	"	——	——
CORN, yellow,	bushel.	67	70
White,	"	67	70
COTTON, Virginia,	pound.	17½	18
North Carolina,	"	——	——
Upland,	"	17¾	18½
FEATHERS,	pound.	35	37
FLAXSEED,	bushel.	1 50	——
FLOUR—Best white wheat family,	barrel.	6 25	6 75
Do. do. baker's	"	5 75	6 25
Do. do. Superfine,	"	5 00	5 25
Super Howard street,	"	5 00	——
" " wagon price,	"	4 87	——
City Mills, extra,	"	——	——
Do.	"	5 25	——
Susquehanna,	"	5 00	——
Rye,	"	4 00	4 50
GRASS SEEDS, red Clover,	bushel.	5 00	5 25
Timothy (herds of the north)	"	2 50	3 00
Orchard,	"	3 00	3 25
Tall meadow Oat,	"	2 00	2 50
Herds, or red top,	"	1 00	1 25
HAY, in bulk,	ton.	16 00	18 00
HEMP, country, dew rotted,	pound.	6	7
" water rotted,	"	7	8
HOGS, on the hoof,	100lb.	6 00	——
Slaughtered,	"	——	——
HOPS—first sort,	pound.	12	——
second,	"	10	——
refuse,	"	8	——
LIME,	bushel.	33	35
MUSTARD SEED, Domestic,	"	5 00	6 00
OATS,	"	36	40
PEAS, red eye,	bushel.	——	——
Black eye,	"	——	1 25
Lady,	"	——	——
PLASTER PARIS, in the stone,	ton.	3 00	——
Ground,	barrel.	1 37	——
PALMA CHRISTA BEAN,	bushel.	2 00	——
RAGS,	pound.	3	4
RYE,	bushel.	69	70
TOBACCO, crop, common,	100 lbs	3 75	5 00
" brown and red,	"	5 00	7 00
" fine red,	"	7 00	9 00
" wrappery, suitable for segars,	"	6 00	12 00
" yellow and red,	"	8 00	12 00
" yellow,	"	9 00	12 00
" fine yellow,	"	12 00	16 00
Seconds, as in quality,	"	4 00	5 00
" ground leaf,	"	5 00	9 00
Virginia,	"	5 00	10 00
Rappahannock,	"	——	——
Kentucky,	"	6 00	9 00
WHEAT, white,	bushel.	1 15	1 20
Red,	"	1 02	1 08
WHISKEY, 1st pf. in bbls.	gallon.	30	31
" in hhds.	"	30	30½
" wagon price,	"	27	—
WAGON FREIGHTS, to Pittsburgh,	100 lbs	2 25	——
To Wheeling,	"	2 50	——
		washed.	*unwash*
WOOL, Prime & Saxon Fleeces,	pound.	52 *to* 62	26 *to* 28
Full Merino,	"	46 52	24 26
Three fourths Merino,	"	39 46	23 24
One half do.	"	35 39	23 24
Common & one fourth Meri.	"	32 34	22 24
Pulled,	"	33 35	23 26

GAMA GRASS SEED

JUST received, and for sale at this Establishment—Price 50 cents per ounce.

The Invoice including packing mats, &c amounts to $30, and the whole will be sold for $20, which may be sent to I. I. HITCHCOCK.

Amer. Farm. Estab.

POINTER.

A FIRST rate Pointer Slut, of pure blood, 6 months old, for sale at this establishment. mh 17

BALTIMORE PROVISION MARKET.

	PER.	FROM.	TO.
APPLES,	barrel.	——	——
BACON, hams, new,	pound.	10	11
Shoulders,	"	8	9
Middlings,	"	8	——
BUTTER, printed, in lbs. & half lbs.	"	37	50
Roll,	"	15	25
CIDER,	barrel.	——	——
CALVES, three to six weeks old	each.	3 00	6 00
COWS, new milch,	"	17 00	30 00
Dry,	"	8 00	12 00
CORN MEAL, for family use,	100lbs.	1 56	——
CHOP RYE,	"	1 50	——
EGGS,	dozen.	15	17
FISH, Shad, salted,	barrel.	5 75	6 00
Herrings, salted, No. 1,	"	4 75	——
Mackerel, No. 1, 2 & 3,	"	5 50	6 75
Cod, salted,	cwt.	2 25	——
LAMBS, alive,	each.	1 25	2 00
Slaughtered,	quart'r	37	50
LARD,	pound.	8	9
ONIONS,	bushel.	62	75
POULTRY, Fowls,	dozen.	1 50	2 25
Ducks,	"	——	2 50
POTATOES, Irish,	bushel.	62	75
Sweet,	"	——	——
TURNIPS,	"	75	——
VEAL, fore quarters,	pound.	3½	4
Hind do.	"	6¼	——

ADVERTISEMENTS

TRIFOLIUM INCARNATUM,
OR SCARLET CLOVER.

Just received a few casks of this valuable grass seed, lately introduced into this country from Germany, where it produces two good crops in one year. From its early growth in Spring, when other articles for feeding stock are so difficult to be procured, it is likely to become a valuable acquisition to American Husbandry. It blooms and is fit to cut in 50 days after sowing, and is not so coarse as the common Red clover, better furnished with leaves, and not liable to lodge or loose its leaves in drying. From its rapid growth it is of great value for an early crop, for soiling in summer, or for supplying food when other grasses are winter killed.

Also in store, St. Foin or Espersett, well suited for high dry soils, improving poor land, &c.

Burnet Grass, similar in character to the St. Foin, being well adapted to high, poor, dry soils.

Spring and Winter Vetches or Tares, Lucerne, Ray Grass, Feather grass, and many other rare, and common Field Seeds.

Twin Corn, producing from 4 to 8 ears on each stock.

Garden Seeds, a general assortment.

ROBT. SINCLAIR, Jr.

April 14. at Sinclair & Moore's Md. Ag. Rep.

WM. PRINCE & SONS,

NEAR N. YORK, will forward their new catalogues, *with very reduced prices*, to every applicant—

No. 1, Fruit and Ornamental Trees and Flowering plants—No. 2 Double Dahlias, and Bulbous Flowers—No. 3 Garden, Agricultural, and Flower Seeds, comprising the most extensive assortment of every class. Of the Dahlia, above 500 varieties, including all the striped and variegated kinds, and assortments of one dozen named varieties selected by us, will be supplied at $3, $4½ and $6, according to rarity, &c. Tree Roses, grafted 3 to 4 feet high, of 50 varieties, and a few dozen of Harrisons new double yellow Rose, which flowers profusely—10,000 cuttings of the Chinese Mulberry prepared for planting at $8 per 100 or $60 per 1000, to purchasers of which the secret will be imparted calculated to cause nearly all to grow. Also 35 bushels Italian Loich seed, a superior grass, recently introduced, 20 bushels Spring Tares, 1800 lbs. White Dutch clover seed, 2000 lbs. Provence Lucerne, 500 lbs. Trifolium incarnatum, or Early Crimson clover, affording the earliest pasturage.

To nurseries and others making large purchases, a very liberal discount will be made and a convenient credit allowed.

Orders must be sent direct per mail, and will receive prompt attention. June 12. 2t

PROOF JACKS FOR SALE.

ONE of 4 years old, rising 53 inches high, an excellent performer, and a sure foal getter, so far as yet tried, which has been enough to convince his owner that he will be, when at maturity, a first rate animal in all respects. He will grow to near or quite 14 hands high. He is of a celebrated and prolific stock in Virginia. Price $600.

Another 6 years old, full thirteen and a half hands high, and not yet at his full growth. Color black, with a mealy muzzle, and very stout and handsome. Imported from Malta when young, and is a first rate foal getter.

Another imported Maltese Jack, 8 or 9 years old; same color and general description as the above, and about the same size. These two animals are equal in every respect, except size (and only between one and two inches lower) to several that have been recently sold for one thousand dollars each. Either of these will be sold for $750, cash.

Also for sale, several good Jennies and two young Jacks under one year old, both of the most celebrated stock in this country. The young Jacks are held at $300 each, and are very promising. Apply to

ap 14 I. I. HITCHCOCK.

BUFFALO BERRY TREE.

SINCE it was ascertained that this tree is diætious (the male and female being distinct trees) we have hesitated to send it when ordered, because our trees are too young yet for their sex to be developed. Under these circumstances we propose to furnish single trees (the sex being unknown) on the following terms:—Trees less than two feet in height at 50 cents each, and those above two feet at 75 cents a piece. When their sex shall have been ascertained we will furnish either male or female trees at $1,25 each, and at $2 per pair. By this arrangement time may be gained by taking young trees this spring and putting them out, relying on the future for mates for them, and nothing can be lost in point of price of them. We have a few from 1½ to 3 feet high, which we will put up to order on the terms above stated.

SINCLAIR & MOORE.

March 31, 1835.

SUPERIOR CATTLE FOR SALE,

OF the Devon, and Devon & Short Horn blood, at Brookland Wood Farm, the residence of Richard Caton, ten miles from Baltimore, on the Susquehanna Rail Road, and on the Falls Turnpike Road, consisting of

Devon Bulls, Heifers and Calves, of all ages of each denomination, from 8 months to 4 years—price, forty to one hundred dollars each, according to age and quality.

Devon and Durham Bulls, the offspring of Devon Cows, by the Short Horn Durham Bull Tecumseh. It is supposed by those persons in England who have dairies of this species, that they will be found superior to all others, uniting the beauty of form, hardiness of constitution, propensity to fatten, and richness of milk appertaining to the Devon blood, and product of milk of the Durham—price, forty to one hundred dollars. Apply to

Feb. 3, 1835. THOMAS BEVAN, Manager.

ORNAMENTAL AND FRUIT TREES.

BARTRAM BOTANIC GARDEN.—The subscriber has for sale at his Garden and Nursery, Kingsessing, near Philadelphia, a large assortment of Fruit Trees of suitable sizes for transplanting, embracing every variety of Apples, Pears, Cherries, Plums, Apricots, Grapes, Raspberries, and Currants, together with a large assortment of Green House Plants, Ornamental Trees, Flowering Shrubs, Evergrens, Vines and Creepers, Honeysuckles, Roses, Carnations and Pinks, Herbaceous Perennial Flowering Plants, &c. &c. comprising as great an assortment as any other Garden in the United States.

Orders per mail, or left at Alderman Bartram's office, No. 126 Walnut street, will meet with prompt attention, and the articles will be delivered in Philadelphia, or forwarded to order, packed in such manner as to bear transportation in safety to any part of the United States.

ROBERT CARR.

☞ The usual annual spring public sale of Plants, including a large collection of the finest Prize Dahlias, will be held as soon as the weather will permit, of which due notice will be given in the papers. mh. 31.

Printed by Sands & Neilson, corner of Calvert and Market street.

THE FARMER & GARDENER;

AND LIVE-STOCK BREEDER & MANAGER.

CONDUCTED BY I. IRVINE HITCHCOCK, AND ISSUED EVERY TUESDAY FROM THE AMERICAN FARMER ESTABLISHMENT, AT $5 PER ANNUM, IN ADVANCE

No. 51. **BALTIMORE, APRIL 21, 1835.** **Vol. I**

☞This publication is the *successor* of the late **AMERICAN FARMER,** (which is discontinued,) and is published at the same office, at five dollars per year, payable in advance.

☞When this is done, 50 cents worth of any kind of seeds on hand will be delivered or sent to the order of the subscriber with his receipt.

American Farmer Establishment.

BALTIMORE: TUESDAY, APRIL 21, 1835.

CULTURE OF SILK IN CONNECTICUT.—The raw silk produced in Mansfield, Conn. during the past season, amounted to more than sixty thousand dollars. This important amount of a single branch of industry in a small country township is almost entirely the product of the labors of children and females, and that too, for only a small portion of the year.

BRICK MAKING—There is a brick making machine now in the course of erection near Louisville, which is to be worked by steam-power, and expected to turn out 200,000 well finished bricks per week.

MANUAL LABOR SCHOOLS will, we trust, ere long be generally established in this country.—They are capable of being made nearly self-supporting institutions. The Albany Daily Advertiser concludes a description of one recently established in Alabama with the following opinion, in which we fully concur.

"We are more and more satisfied that our collegiate educations as they are termed are fallacies. Not one-half of those who obtain diplomas are really entitled to them. The system appears radically defective. The studies do not seem to take hold of the mind, their application to the uses of life are not seen or explained—The course of study is irksome, the principal study of the young men is to graduate rather than learn, while in the Manual Labor Schools, the very disposition with which a student enters one of them will almost insure him valuable attainments, and good habits."

WOOL GROWERS FAIR—The Franklin Mercury, published at Greenfield, Mass., recommends the establishment in some convenient town in the interior, of a general wool market. The plan proposed is in accordance with the Fairs in Europe, where, on an appointed day, all interested either as sellers or buyers come together, and the business of the year is done up at once. The suggestion is a good one, and we presume will be acceptable to all parties. The wool trade of our country is becoming of great importance, and the mode of carrying it on, must of course assume more system and order.

THE SILK CULTURIST, AND FARMER'S MANUAL; *Published by the executive committee of the Hartford county silk society.*

TERMS:—The Culturist will be published monthly at Hartford, Conn. at fifty cents a year in advance.

☞Letters or communications addressed to *F. G. Comstock*, Secretary of the Society, post paid, will receive prompt attention.

We have received No. 1 of a paper bearing the above title, and bid it a hearty welcome. Thus step by step will that vastly important branch of American industry, the silk culture, advance, till it shall be numbered among the principal sources of our national wealth. We heartily commend this subject to the serious attention of every farmer, and advise him to devote a few hours this spring to the commencement of a mulberry orchard. He may rest assured that he will not lose his labour, for even if he shall never raise a silkworm, still his trees will always be worth all they may have cost him.

We have not room to-day for the introductory remarks of the editor of the Culturist, but would suggest to gentlemen who can afford it, and who are zealous for the real improvement of our country, to procure instead of "Extra Globes" and "Extra Telegraphs," $5 worth of copies of this work, and distribute them among such of their acquaintances as will not otherwise be likely to see, or even hear of the work—such as women, children, old persons, and others who have to maintain themselves by their industry, and are not capable of heavy or hard work.

DESTRUCTION OF FRUIT TREES.---We learn by a letter from St. Augustine, that the severe cold of last winter has made sad havoc with the fruit trees in the vicinity of that place. The orange trees, which were expected to yield a bountiful harvest the present year, it is said, will not yield a single orange. A large portion of them are entirely destroyed, and the remainder partially so; and of the lemons and limes, not a tree is left alive. The loss is estimated at $800,000.---*N. Y. Com. Adv.*

The Catterpillars and the Cold. With all the distress attending the severity of the late winter, one benefit at least results from the extreme cold. The catterpillars, that have been increasing for some years in this neighborhood, had become so numerous during the last season as to destroy, not only the fruit, but likewise the fruit trees. Judging from the extraordinary number that have been hanging enshrouded from the boughs of the cedar, poplar, &c., during the winter, we feared an army in the spring that would make a devastating march through the country. From this apprehension, however, we have been happily relieved by finding that of all the cocoons we carefully examined, only one contained any appearance of vitality.—*Nat. Intel.*

[Communicated for the Baltimore Patriot.]

CATTERPILLARS.—It has been announced by the National Intelligencer, that Caterpillars have all been killed by the severity of the winter. The Editors come to this conclusion from having examined some *cocoons*, in which they found no living insects. The Editors are not aware, probably, that the Caterpillars passed the winter in the *egg*, and not in the *cocoon*. The cocoon is merely a place of accommodation for the insect while passing from the larvæ to the perfect or the butterfly state in summer. The butterfly deposites her eggs on the small green limbs of fruit and other trees, where they remain till the vivifying rays of the vernal Sun brings them into active life. The nest of eggs resembles a ball of Shoemaker's wax wound firmly round the young limb, about half an inch wide, and an eighth of an inch thick. On looking closely at it, it resembles honey comb in formation. But the object of this is, not to discuss natural history, but to hint to every person who has a tree on or near his premises, to commence war upon this most detestable of all insects. They are now coming out by thousands, and are easily destroyed. If every body would now begin they can be easily prevented from extending their ravages the ensuing summer. Only look at it: Two young caterpillars killed now, will prevent the existence of about *sixteen millions* in the course of the season; for they breed three or four times each summer, and each time produce about 400. Half of them being females, say 200, multiplied by 400, makes 80,000 for the second brood; half being females, 40,000 multiplied by 400, makes *sisteen millions*, for the third brood! Don't this speak loudly in favor of the maxim that "a stitch in time saves nine." G. B. S.

Oddities and singularities of behaviour may attend genius; when they do, they are its misfortunes and its blemishes. The man of true genius will be ashamed of them; at least he will never affect to distinguish himself by whimsical peculiarities.

THE FARMER.

From the Intelligencer and Expositor.

IMPROVEMENT OF SOIL.

As there is a *fatal timidity* in our section of country in adopting any *new* theory, especially if it is found making an inroad upon *old* and well established *habits*, it may be found to aid in shaking those habits, or projudices, to give authorities, or *names;* for *names* with the victims to prejudice, go a strange length. The breast of an American planter would be only exhibiting a patriotic feeling, in addition to an exhibition of good sense, that would be found glowing, at the mention of the name of the "Father of his country," as an authority, for the use of the last article in the formation of a compost heap. In his last directions to the conductors of his extensive farms, and as the result of agricultural knowledge, accumulated by half a century of experience and close observation, he says, "all the hands of the farm, not indispensibly employed in the crops, should, as soon as the corn planting is completed, in the Spring, be continually employed in raising *mud* from the Pocosins, and from the beds of the creeks, and to be incessantly drawing it to the *compost heaps* in the fields." And again, "stables and farm houses," "those ought to be well littered, and the stalls clear, as well for the comfort of the creatures that are contained in them, as for the purpose of manure; but as straw cannot be afforded for this purpose, leaves, and such spoiled straw, and weeds, as will not serve for food, must serve for the stables, and the first, that is leaves and corn stalks, are all that can be appplied to the penns." To the foregoing may be added the authority of a distinguished southern planter, J. H. Cowper, Esq. of South Carolina. Fifty thousand pounds of dry vegetable matter, "*carted to the penns*," (not suffered to lie in the fields,) if merely rotted by rains will yield one hundred thousand pounds of manure, and if rotted by the wind and dung of stock, from one hundred and fifty to two hundred thousand pounds."

SOOT will not be lost, with all *refuse ashes*, thought unfit for the hopper. The first has been found, after repeated experiments, to be an admirable manure, and deserves to be carefully husbanded. The dung stead will be a place of deposit for it, and for the last, equally convenient, and proper as also for a quantity of SOAP-SUDS, that every well regulated house furnished weekly, and which, after performing every other duty, will be found a valuable acquisition to the mass.

ASHES, leach'd from every thing that burns into them. The effect of a log heap being burnt on the ground must be familiar to all, and if leach'd ashes are given to corn ground, they will be found as decided in their improvement of the growth of the plant. In what way, or by what operation in the great laboratory of nature, this result is effected, is not for this time or place to discuss. It is sufficient for us that we know that the effect is admirable, consequently, that every particle of *ashes* should be carefully husbanded, and spread over the dung stead; and it must be equally plain, that if every particle is taken care of that is produced in the burning of a plantation, a prodigious pile will be found at the end of the year, especially if *clean clothes* and *ley-hominy* are plenty, and which ought to be *inforced* in our climate by a legislative act; both not only as a security for *comfort*, but more, if posible, for *health*.

In many districts of Europe, as also in the United States, and where agricultural operations are carried to high perfection, this article has been found to be worthy of purchase and transportation for a great distance by land and water. In point of *durability* it has high claims. In preparation of a piece of soil, for a *corn* crop, which ultimately produced one of the *heaviest* crops known, it had a principal agency. It has been found to change thousands of acres of poor lands perfectly unfriendly to cultivation, into admirable grass lands, and eventually productive of corn and grain.

ROTTEN WOOD of every description will be collected when gathering *leaves*, and will be found, when charged with liquid of the manure pile to be productive of admirable effect. This last item ought to form a principal ingredient in the compost for the *garden*, being absolutely necessary to produce the most *delicate* and *delicious* of some garden productions, viz: the *grape*, the *melon*, *cucumber*, *strawbery*, &c.

SAW DUST cannot be lost with propriety, but with the aid of *calcarious* matter may be prepared for the compost heap, and be made to form an admirable addition. Heaped up in alternate strata, with *lime* and rich vegetable earth, until a decomposition has partially taken place and somewhat progressed, it may be scattered over the dung stead previous to the usual strata of leaves being added, as also all the TANBARK that has been thrown from the troughs or vats, or that can be economically procured.

While I should dispose of LIME without the additional trouble or loss of time required in two transportations, say to the dung stead, and thence to the field, I would most assuredly when spreading the two last articles on the compost heap be always prepared with a portion to scatter over them.

During the last season, I was called on to view a field of corn, and which, by the surrounding neighborhood was deemed a most extraordinary production. On enquiry I soon learned that it was well *manured* with an excellent *compost manure*, made so, purely accidental. The corn making season was good, and the land well tended. The growth, and production, was certainly, for our country, almost unequalled. It most completely exhibited the full effects, on our second rate lands, of judiciously compounded manure, and good cultivation. Planted at *three feet*, and about twelve inches, from stalk, to stalk, the ears were as fine, as I have seen, frequently two on the stalk. Whilst it could not be viewed as a judicious mode of planting that grain, as it was not playing the *sure game*, of planting for *atl seasons*, it was a valuable exhibition of what *manuring* will do in our climate, and on our second rate lands. The season saved it, and admitted the *manure* and *cultivation* to do all, that they could do. The land without the first, would not have exceeded fifteen bushels per acre.

After a formation of a receptacle for *collecting* and *forming* a compost manure, which I have heretofore suggested, and which I shall hereafter intend by the term, *dung stead*, and it may be necessary before going to work in it, to lay down some two or three positions, and which with those who have either observed, or become informed on the subject, will give a sufficient view, taken in connexion with foregoing remarks, without going much into detail, of the agricultural theory on which my system of *applying* manure, will rest—as also of the chemical theory I have adopted in the formation of it.

I am perfectly satisfied that a *rotation of crops* is indispensible, manure, or no manare—and that to be continually extorting from the earth, the same plant, is a violation of nature's laws, and proved by ample experience, injudicious, and consequently in the result, unprofitable. That in the rotation we must have, *restoring* crops, or *resting* or *shading*, satisfied that the action of the burning rays of our summer's heat, is one of the great causes of the deterioration of soil, when it is frequently turned over, and exposed to this action, during our summers.

That in this rotation if we go on the improving, or even the preserving system, and endeavouring to take as much for the labor bestowed, and the land labored, as either can be made to yield, we must in that rotation have one crop, especially calculated for the winter support of our cattle, as the theory that holds good with respect to the best and most profitable system of cultivating the earth, will apply equally to *stock* of all kinds, viz: that the *improving system* is the most *profitable* in *every point of view*—a *good* Cow, a *good* Steer or a *good* pair of Steers, will sell well—indifferent, or bad, of either, will not. My rotation then is—the *fisrt* year CORN with *manure*, along with the *Cow-peas*, *Sweet-potatoes*, &c.

Second year COTTON. *Third* year RYE, the stubble turned in on peas, as soon as the Rye is taken, or can be taken from the field. The *fourth* year OATS, with *peas*, ploughed in on the stubble, as in the Rye crop. The fifth year *rest*—and pasture until September, when the grass weeds, &c. are turned under and Rye harrowed in, preparatory to a CORN crop with manure.

This rotation embraces five years, and five fields employed every year, when the crop of the year will be corn and peas, in one field, one field in *cotton*, one in *rye* and *peas*, and one field of each *oats* and *peas*, and pasture. The *cultivation* of these crops will come in hereafter. In this rotation, I give my whole manuring to the CORN crop, and this manuring must be well done, as it is intended by my mode and manner of cultivation, to secure the whole rotation, heavy crops, say seven crops, in four years.

CORN is certainly the hog of the vegetable world. It readily receives the worst of food, and thrives on it, most rapidly—nothing too gross, or unprepared, if there is only a sufficiency of fermentation, and putrifaction. It is a most generous plant, will receive food half prepared, and show fully its keeping, if a generous allowance of even such is distributed. Give it elbow room, and keep away *competition*, and this plant, so friendly to man, and his labors, will do its best.

The Irish potatoe, is of this class—the cabbage—sweet potatoe and some others. Not so with the small grains, cotton, and most garden productions. They require better food, and better prepared—to do their best.

Whoever wishes to see a practical proof of this may take *pea* or *potatoe vines* when at maturity—open a trench, and lay them in, covering them up well with the earth, planting on this earth in the following spring Indian Corn, without disturbing the decaying vegetable matter. The growth of the corn will astonish those, who have never before seen the trial made, but let him put those same vines in the dung stead a few weeks, in such a position, that they can become fairly saturated, with the liquid part of the dung, and the result, although great in the first, will be singularly increased by the latter.

Chemical experiment I think has pretty well settled that in the minute subdivision of the particles of matter which takes place in the decomposition, the food of plants is prepared, and also that a part most important flies off if not arrested by some absorbing matter, and none is found superior to the earth.

PLANTER.

THE BREEDER & MANAGER.

[From the London Lancet.]

DR. YOUATT'S VETERINARY MEDICINE.

LECTURE XIV.

DISTEMPER, OR NASAL CATARRH IN THE DOG. CONCLUDED.

Nitre.—To the digitalis and antimonial powder I should add nitre, as likewise a sedative, and also a diuretic. The proportions would be from half to one grain of digitalis, from two to five grains of the pulvis antimonialis, and from a scruple to a drachm of nitre.

Worms to be got rid of.—In these affections of the mucous membranes, it is absolutely necessary to avoid or to get rid of every source of irritation, and there will generally be found one, and a very considerable one, in young dogs, worms. If we can speedily get rid of them, distemper will often rapidly disappear; but if they are suffered to remain, diarrhœa or fits may supervene; therefore some worm medicine should be administered.

I have said that vomiting is very easily excited in the dog, and on that account we are precluded from the use of a great many medicines in our treatment of him. Calomel, aloes, jalap, scammony, and gamboge, will generally produce sickness. It is because the greater part, or the whole is rejected, that some sportsmen are enabled to give the unconscionable doses of calomel that they do. I have heard of twenty grains being administered at a dose, and the dog did well. The truth of the matter is, that the whole, or by far the greater part of it, is almost immediately thrown off from the stomach. I know that, until somewhat dearly-bought experience taught me better practice, I killed several dogs, and I am now accustomed to set down these calomel givers as knowing nothing of the treatment of the diseases of dogs.

So many medicines almost uniformly causing sickness in the dog, we are therefore driven to some mechanical vermifuge; and a very effectual one, and what will rarely fail of expelling even the tape-worm, is tin-filings or powdered glass. From half a drachm to a drachm of either may be advantageously given twice in the day. I generally add them to the digitalis, James's powder, and nitre, made into balls with palm oil and a little linseed-meal.

Is the fever subdued?—Should the huskiness continue, with redness of the eyes and impatience of light, I should fear determination of blood to the head. The membranes of the brain, although not mucous ones, are contiguous to the seat of disease.

Setons.—In this case, and especially if the dog does not rapidly lose flesh, I should be disposed to take more blood, and to put a seton in the poll; but I would use the proper seton needle, and not the barbarous red-hot iron of the farrier. It should be inserted between the ears, including as much of the integument as possible, and, indeed, reaching from ear to ear. When there is fever and huskiness, and the dog is not much emaciated, a seton is an excellent remedy; but if it be used indiscriminately, and when the animal is already losing ground as fast as he can, and is violently purging, you will only hasten his doom, or, rather, make it more sure.

Treatment of more advanced stages.—I will suppose, as its too often the case, that the huskiness and fever still continue, with laborious respiration. Not that laboured breathing which is produced by the indurated mucus about the orifice of the nostril, causing a frequent but unsuspected obstruction, but the evident result of inflammatory affection of the lungs; the dogs do not lose flesh, and there is no alarming superpurgation; we must very cautiously bleed again; more aperient medicine must probably be given, and the sedative medicine must be continued, and more frequently, and in larger doses. A change, however, will now take place; either the symptoms will gradually remit, the discharge from the nose will cease, the eyes will clear up, and the appetite will return, or rapid emaciation and debility will ensue.

Tonics.—Then we must change our system, yet not altogether. It is a treacherous disease with which we are contending; the fire may be smothered, but not extinguished. The pulse will even now indicate strong arterial action. We must retain a portion of our sedative medicine, but we may try whether we cannot beneficially stimulate other tissues—those of the digestive organs. We mingle with our former medicine the powder of the camomile flower, a carminative, and not an emetic in the dog, a mild tonic, and its power chiefly exerted on the intestinal canal, and to this we may add the gentian root, a tonic and stomachic, and without any great direct influence on the circulatory system. We may even venture on a little ginger, the best stomachic for the dog we have.

Treatment of Purging.—Now, or often ere this, the mucous membrane of the bowels shares in the inflammation, and there is considerable purging. The fæces are white or grey, or olive-coloured, or bloody, and soon becoming mixed with mucus and blood. We must first give an aperient—a dose of Epsom salts. Even in this apparent state of debility we must not arrest the hæmorrhage too suddenly, or we shall have metastasis of inflammation, and probably to the head.

Having possibly got rid of some source, or at least prolongation of intestinal irritation, by means of our aperient, we exhibit chalk in one or two drachm doses, for there is generally much acidity in the stomach, and catechu in doses from a scruple to a drachm. We have not a better astringent for this animal, whether in diarrhœa or dysentery, than opium, but this in very small quantity, from the naturally great and now morbid sensibility of the stomach, the dose not exceeding from an eighth to a fourth of a grain. The stomach will not always bear even that, in which case we must have recourse to opium under another form—the syrup of white poppies, which may usually be given in doses from a scruple to a drachm, without producing sickness.

Injections of these medicines suspended in thin gruel may be administered with advantage. If they do not restrain the flux, they will relieve the straining and tenesmus, which almost invariably accompany distemper-purging.

Fits.—Other symptoms have been described as now appearing. The balance of healthy action being destroyed, the nervous system shares in the irritability, and fits begin to appear. I have described the peculiar action of the lower jaw, by which you will recognise their approach.

Give immediately an emetic, and on the principle which I have already explained. The stomach is the grand link in the chain of these fearful associations. Let it be a pretty smart emetic, and of double the strength that you would give under ordinary circumstances; you may, perhaps, by this means, prevent the formation of the habit of fits.

If the dog is not too much emaciated, and if the fit is not evidently the consequence of the irritability of sheer weakness, you will bleed. But suppose the fit to be established—some have told us to slit the ears, or cut off a portion of the tail, or throw water upon the dog, or throw him into the water. You will do little good by these things. Take him by the nape of the neck with your left hand, grasp him firmly, and then from a tea-cup, or other similar vessel, dash cold water as forcibly as you can in his muzzle. The suddenness of the shock will sometimes break at once the morbid association. You will also administer an emetic as speedily as possible.

If a second fit succeeds, the animal will, in the majority of cases, be lost. Your only hope is in opium and tonic medicine combined. The dog must be drenched with the syrup of white poppies, the only form under which it can here be given, the camomile, gentian, and ginger ball being continued. The syrup of buckthorn may be united to the poppy syrup to obviate costiveness. A seton should now be introduced, if it had been previously neglected.

If crying fits come on, although we have reason to hope that the animal does not suffer so much as his continual moaning would lead us to suppose, it is a duty of humanity to put a speedy termination to that which we cannot cure.

Fœtid discharge from the nose.—It has been stated that the discharge from the nose will, in the latter stages of the disease, strangely increase, and it will become purulent, bloody, and fœtid; chancres will appear about the lips and gums, with drivelling of fœtid saliva. We may relieve this nuisance to the animal and ourselves, by the application of a solution of chloride of lime; but as

an internal medicine, this excellent disinfectant is powerless. We have, however, a valuable agent in checking this tendency to putridity in yeast—good yeast from genuine malt and hops, if it can now-a-days be procured. Its effect is sometimes admirable. It may be given in doses from a dessert to a table-spoonful, every day at noon (the tonics being continued at morning and night), until the ulcers heal and the drivelling ceases, and the stench is removed, unless too great purging should be produced.

Treatment of the Eyes.—If there be much inflammation and ulceration of the eye, the tincture of opium or digitalis, diluted with four times its quantity of water, may be used as a lotion with good effect. The inflammation being a little abated, the diluted extract of lead (20 drops to an ounce of water) will follow with more benefit. If fungous granulations should protrude from the ulcer described at the centre of the eye, they should be cautiously touched with the nitrate of silver, either in substance or a strong solution, lightly applied with a pencil; and the inflammation still lessening, the sulphate of zinc may be resorted to, two grains being dissolved in an ounce of water, and the proportion of the zinc gradually increased to six grains.

Treatment of Tumours in the Throat.—The tumour in the throat may give us some trouble, but we may hail it as the harbinger of success.—The foe has been driven from the citadel, and is making his last stand at some of the out-works. The tumour should be fomented, and if it does not supperate sufficient, speedily blistered. It must be opened as soon as matter is fairly formed, treated in the usual way, and the strength of the dog supported by tonics.

Eruption.—A scurfy, patchy eruption over the belly and inside of the thigh will likewise be regarded as the precursor of health, and on the same principle as the tumour. It resembles mange, but it is not that disease. It will readily yield to the common calamine ointment, rubbed down with one-fourth part of liquid turpentine. A few balls of alterative and tonic medicine combined, will expedite and complete the cure.

Chorea.—The chorea which appears after distemper, oftenest when the disease has been injudiciously treated, but occasionally after it has assumed its mildest form, is more easily and successfully treated than a similar complaint in the human being. If the dog has not lost much flesh, and his appetite continue, and the weather is tolerably fine, and especially if the spring is advancing, he will generally be cured by quarter-of-a-grain doses of nitrate of silver, made into pills with linseed meal, and given morning and night. If the animal, however, is dry, poor, and getting poorer, the twitchings will probably spread from limb to limb, and terminate in crying fits.

Treatment of the Greyhound.—The form which the disease assumes in the greyhound will often baffle us; there will be rarely fever enough apparent to justify bleeding, or cough to require the use of sedatives; yet the animal will slowly pine away and die. Moderate bleeding in the early stage will, however, be useful, and a free evacution of the bowels with some unirritating aperient, and an occasional emetic, and the mingled tonic and sedative balls, and if the disease is at all obstinate, a seton in the poll.

Yellow Distemper.—The yellow distemper is decidedly the worst to treat; although attended with little fever, it runs its course with fearful rapidity. The bowels must be well opened with aloes and calomel, and the blue pill with tonics, given morning and night in doses from three to five grains.

Caution as to the insidious character of the disease.—In the treatment of distemper, remember the treacherous character of the disease with which you have to contend—the necessity of prompt and decisive measures at the commencement, and of the careful and anxious watching of each strangely-varying symptom. I will add, that the disease is even more treacherous at its close than in any period of its course. When apparently subdued it is only lurking in the system, and ready to be recalled by a very slightly-exciting cause. I am almost ashamed to confess, how many patients I have lost by discontinuing my medicines too soon. The owner has lost many more by working the dog ere the distemper was completely eradicated. You will have a somewhat difficult course here to pursue; you must not seem unnecessarily to plunder your employer, and you must not compromise your reputation by dismissing your patient only half cured. If, however, you cannot continue your medical treatment so long as you could wish, you will always caution your employer to give no violent exercise or hard work to the dog just recovered from distemper, for if he does, fits will to a certainty supervene, and carry off the animal in a few days.

Vaccination.—Is there any preventive? None but good feeding, and the avoidance of contagion. I know not the practitioner of human medicine to whom we are more indebted than to the amiable and excellent Dr. Jenner, and I know not one who has got us into such sad scrapes. We could easily imagine, even before the identity of cow-pox and small-pox was ascertained, that from the affected tissue, the pustular character, being the same, there might be some protective power in the one with regard to the other; but that cow-pox should possess this preservative influence over a disease so dissimilar in the tissue affected and in fact presenting not one common character, or symptom, exceeded all belief. Dr. Jenner, however, fell into the error of many ardent and superior minds, and pushed his theory even farther than the loosest analogy would warrant, and he maintained that inoculation with the matter of cow-pox was a preservative against the distemper in dogs.

No prevention.—He found some medical men, and many that were unaccustomed to medical reasoning, who placed implicit faith in the assertion of such high and well-deserved authority, and it became the fashionable doctrine that cow-pox was a preservative from distemper, and some said even from rabies too. I will not urge that Dr. Jenner's account of the distemper in the dog was unlike that of any disease to which this animal is subject, that it was made up of the symptoms of distemper and rabies, and yet erroneous in both, but the plain fact is that cow-pox is no preventive against distemper. I speak from the fullest experience, for in determination to come to some satisfactory conclusion in my own mind, and afterwards to satisfy, as far as I could, my sporting and scientific friends, I more than once fairly wore out the patience of the benevolent Dr. Walker, by my repeated applications for vaccine matter.

In some cases I could not induce the disease, in others certainly I could not afterwards produce distemper, but in the very decided majority I produced it, and not disarmed of one of its terrors.

There was one gentleman in the neighbourhood of Bath whose breed of greyhounds was unrivalled. I had for some years the principal management of his kennel, and the whelps, and some of the best of them, and too many of them, would die of distemper. He heard of Dr. Jenner's preventive, and was persuaded into a belief of its infallibility, and having made up his own opinion, he wrote to me for mine. I stated mine in no very measured terms, and he was offended. The dogs were vaccinated, and the season passed over without one case of distemper, and I had a very angry and sarcastic rebuke. But on the following year this canine pest again broke out, and almost cleared his kennel. I, however, had irrecoverably lost my friend and employer, therefore I say that the worthy doctor, in the fulness of his zeal, has got us into sad scrapes, for some of our best friends have not scrupled to attribute our scepticism either to obstinacy or ignorance, or to some worse motive; about the same time, inoculation with the matter of distemper came into vogue. Its days were short, for it produced a more virulent disease, even when the lymph was taken at the earliest period.

Strange list of medicine for Distemper.—Gentlemen, I will not detain you with a long list of boasted specifics against distemper, nor of the usual modes of treating it, as numerous as the practitioners, and as different as their unaccountable and varying fancies. Some rely entirely on purgatives; others bleeding and physicking; others on emetics; some put tar upon the nose, others a pitch plaster, and some cauterize the nasals; some inject vinegar into the nose, others hellebore, and others a solution of camphor; some cut off the tail, others the ears; some give tobacco and olive oil, others the golden sulphuret of antimony; the keeper gives the turpeth's mineral; the more scientific of these gentry will knock down the disease, and the dog too, with arsenic. The gentleman will give compound tincture of benjamin, the farmer common salt; the medical man sulphuric ether, or emetics and sulphur, or emetics and jalap, or emetics and scammony.

Benefit of Emetics.—The medicines are as numerous as the changing characters of the disease, and yet applied indiscriminately to all of them.—All that I can say to you is,—Never forget the character of the disease, one of the mucous membranes of the respiratory passages, and, therefore, what you do, do quickly. If there were one mode of treatment which I should recommend more than any other, it would be the frequent administration of mild emetics, equal proportions of calomel and emetic tartar, and rarely exceeding a grain of each. You will always give immediate relief to the animal by freeing the air-passages from an annoying accumulation of mucus; the mucus afterwards secreted is less viscid. The force of the

circulation is more certainly and beneficially subdued by the nausea attending an emetic, than by any other means. There is no permanent exhaustion after it: nature points it out as the natural medicine of the dog, and one that is totally free from danger.

Caution as to Purgatives.—If there were one mode of treatment against which I should caution, it would be the use of frequent, and, more particularly, of violent cathartics; there is too much tendency in this disease to spread to other mucous tissues, and to that of the bowels first, and most fatal of all. I would lay it down as a rule that scarcely admitted of exception, that except in the early stages, no stronger purgative than castor oil, or syrup of buckthorn, or Epsom salts, should be given, and they only when manifestly required. The purging of distemper is with the greatest difficulty allayed. If it runs to any considerable extent, it is rarely or never salutary, it is never the *crisis* of the disease.

Conclusion.—Then suit your medicines to the varying symptoms of the disease, support the strength of the animal; keep him quiet and tolerably warm; do not imagine that the animal is well before he really is, and do not expose him to the danger of a relapse.

THE GARDENER.

[From the American Gardener's Magazine.]

Detail of a Method adopted in PLANTING OUT AN ORCHARD *of six acres with Apple and Pear Trees, in* 1830 *and* 1831*; deep planting dispensed with.*

All the varieties of fruits known to the writer, that were deemed important to the wants, or embellishments of the garden or orchard, had been procured previous to the organization of the Massachusetts Horticultural Society. By the formation of this excellent Society, however, and the exertions of several of its members, a great number of new and valuable fruits were brought into notice, by its extensive correspondence with other similar societies in Europe, and on the continent. Such as had been tasted, or highly recommended by the committee, were deemed of sufficient value and importance to be added to the selection, which embraced a large number of varieties. A piece of land was decided upon, which was thought the best suited for the growth and future health of the trees, the embellishment of the place, and least liable to be encroached upon by future alterations of improvements upon the farm.

Agreeing with Dr. Johnson, that "with method, almost any thing may be done, and without method, nothing well done," the following system was adopted:—A plan of the land was procured; the distances from which each tree was to be placed from the other, each way, was decided upon, which averaged about thirty-three feet; a reference book in connection with the plan of the land was next procured, and on it was designated each variety of tree, in its relative position. The land was then prepared, by taking from its surface all the stones, stumps, trees, shrubs, bushes, &c., all holes or uneven places were filled up, and the ground made as level as possible; the land was then ploughed deep, with the sod smoothly inverted; it was also harrowed five times lengthwise of the furrows, previous to planting, which caused the soil to be broken up fine, without disturbing the sods.

The trees were selected from the various nurseries around Boston, Salem, New York, Albany and Philadelphia, amounting to one hundred and eight varieties of apples, and forty-two of pears,—in all two hundred and twenty trees. The trees were all forwarded to me in the fall of 1830, and placed in a trench dug sufficiently deep to cover the roots, and secure them from the frosts and cold of winter, to be ready for planting out in the ensuing spring. Each variety had been noted and labelled while in the trench, in such a manner, as to guard against the loss of their names. Previous to setting out the trees in the spring of 1831, in their intended places, the land had been well manured, and harrowed in. Placing the plan on a board with the reference book, the respective place of each tree with their proper distances was easily found with the aid of a surveyor's chain; from one to two inches only of the soil was taken from the sod, and the trees carefully planted—previously to which, however, they were properly and judiciously pruned, and the roots trimmed of all broken or bruised fragments, if in some instances it could be said they had roots. In this manner the whole number were placed out, and covered with a little free rich mould, not *over* two inches, puddled with river water and gently trod. This was done in the last week in April, and serious doubts were apprehended whether they would in this manner stand alone. The land was planted between the trees with corn and potatoes, without further ploughing, and an excellent crop was obtained; but *two* trees died, and only four more required additional soil on their roots; and so far, I have never had trees do better, during twenty years' experience, in the management of an orchard of twenty acres. I have no doubt, had the land been deeply trenched to the depth of one or two feet, and from six to twelve feet in diameter, where each tree was set, they would have done much better; but this is too forbidding to most persons.

I have only aimed in this communication to give you what I consider practicable. In all cases I would impress upon the gardener, orchardist, or farmer, to avoid deep planting, as it is not necessary to preserve trees from high winds, and is absolutely deleterious to their future progress and health. Yours, B. V. F.

Boston, Feb. 19th, 1835.

[From the same.]

On the cultivation of the purple variety of EGG PLANT (*Solánum ovígerum.*)

The White Egg Plant is an annual, a native of Africa. It was introduced into England in the year 1597, and has ever since been cultivated as an ornamental green-house plant. It grows about two feet high, with somewhat pendent branches; the flowers are of a pale violet color, and are followed by a large berry, or fruit, of an oval shape and clear white color, very much resembling, when not overgrown, a hen's egg.

The original species, the white, is seldom made use of, but the purple variety is, by the French and Italian cooks, generally used in stews and soups: and dressed in different methods, it forms a very delicate dish. In the East and West Indies it is used in like manner, and is also cultivated for the general purposes of the love-apple.

We have raised specimens of the purple, which have weighed between three and four pounds.—We observed at the Horticultural Society's exhibition last fall, some plants in pots bearing one or two fruits of very large size; and we have occasionally seen them in our markets, of fair quality; they seem to have been almost wholly unknown as a culinary vegetable, and have generally been sold at a price, which would not pay the marketer for his trouble in bringing them to the city. From this cause, their cultivation has been neglected, and they are now seldom to be found. Within the two past years, however, we have known some, in the early part of the season, to command a good price, and we doubt not but in a few years they will be as eagerly sought after as the Tomato.

Our New England summers are not of sufficient length to bring to perfection this vegetable, unless the seeds are planted in a hot-bed in the month of March, and the plants transplanted to the open garden in May or June. Those persons therefore, who have not a hot-bed, cannot expect to raise them, unless they procure the plants from some place where plenty of seeding are grown.

Our method of cultivation was as follows:—In the month of March, we sowed the seeds in a pot filled with light soil, and placed it in a hot-bed, the minimum temperature of which was about seventy-five degrees; as soon as the plants were up, we placed them where they would receive the influence of the air admitted into the bed, to prevent their drawing up weakly; for if this is not attended to, the young seedlings are invariably destroyed. As soon as they threw out two rough leaves, we potted them off singly into pots, (No. 2,) in the same soil as the seeds were planted.—Water was given rather sparingly at first to prevent dampness; but as soon as the plants showed signs of growing, it was given more freely. The heat of the bed was not suffered to decline, as this would check them at once. In four or five weeks they were again repotted, using pots of the 4th size. In these they remained till May, when they were turned out in the garden. The plants should be set about two and a half feet apart each way, if planted in a bed; but we have grown them on the edges of walks and flower borders, where we not only found them to grow luxuriantly, but were quite an ornament; three or four of their large dark purple fruit, on each plant, having a very showy appearance.

Prepare the soil where each plant is to be set, by first taking out two or three spades full; then fill the hole partly up with old rotten manure, composed of decayed leaves, or dung from an old hot-bed; mix the soil first taken out with this, place in the plant and level off, finishing with a very light watering, if dry weather. If the plants are well rooted in the pots, and the transplanting judiciously done, they will not require shading from the sun. When they show flower, they should have a stake put down to each, to which they should be tied, as the weight of the fruit, as it

grows, will be liable to break the branches. No other particular care is requisite throughout the summer.

[From the same.]

Observations on the cultivation of the early variety of POTATO *called Perkins's Seedling.*

Gentlemen.—Having repeatedly been requested by you to give an account of my success in raising early potatoes, I send you the following brief remarks:—The early potatoes that have been exhibited by me for several years in succession at the Hall of the Massachusetts Horticultural Society, and so frequently the first in the market, were raised from the variety generally called Perkins's seedling. I first received a small quantity from my friend, Solomon Perkins, Esq., of South Bridgewater. They were the produce of a kind which he raised from the potato balls, a year or two previous. Whether or not he adopted the method pursued in England by many of the most scientific cultivators, of cross impregnation in the parents of this variety, I am not aware; but that this kind is much earlier in coming to maturity, than any other raised about Boston, is too well known to need repetition.

The manner in which I have planted the potato is somewhat different from that generally pursued by most gardeners; the soil where they were grown was deep, and rich. Early in the spring I usually gave the ground a deep ploughing, after which it lay exposed till the time of planting;—this was done according to the earliness or lateness of the season—sometimes early in March, and again not till the latter part of the month. When ready for sowing, drills were made three and a half feet apart. The manure that I generally made use of, was very strawy and coarse; I have had good success by using the covering of leaves, sea-weed, &c. taken from strawberry beds in the spring;—spreading it in the furrows. The potatoes that I have generally selected for seed were fair, and about the middle size; I prefer such, to those that are large and overgrown. The small ones, however, I invariably refuse, as they do not come forward so early, and never grow vigorously. It is too frequently the practice with many persons, to sell all those large and fair, and plant the small ones remaining on hand. Nothing can be more prejudicial than this, for it soon causes a deterioration in size and quality, which by some is supposed to be a mixture with some other variety. The potatoes were cut in half, and planted about six inches apart. I omitted covering them for three or four days, unless frosty weather, as I found that they were apt to rot; but by leaving them to shrivel for a short time, and then covering them at once, they started much sooner and made stronger shoots, though it is characteristic of this variety never to make strong vines. When they were hoed, I was careful they were hilled up very sparingly, for when covered too deep I observed their flavor was inferior to those grown where the soil was more shallow. I have tried a number of varieties which were reputed to be very early, and also of excellent flavor; but I have never found any of them so early as the Perkins seedling, or any that would so well repay all the trouble bestowed on their cultivation. The size of this variety is large, some that I dug on the 13th of June, 1830, measuring *nine and a half inches* in circumference, and perfectly ripe. The potatoes are of excellent quality; where this variety has been raised in the country, some distance from the city, it has been preferred to almost every other, exclusive of its earliness, for yielding large and abundant crops.

I have now mostly given up the raising of potatoes, having my ground chiefly occupied with grape vines, &c. Among other varieties, is one I have raised from seed, the fruit of which I have once or twice exhibited to the Massachusetts Horticultural Society. In some future number I hope to give you an account of its origin, together with some observations I have made, in raising several vines from seed of the Isabella, &c.

Yours, SAMUEL POND.

Cambridgeport, Feb. 6th, 1835.

MISCELLANEOUS.

[From the Cultivator.]

PRUSSIAN SCHOOLS.

We have perused, with much interest, the report of M. Cousin, on the state of public instruction in Prussia. It presents, in our opinion, the best model of instruction that can be any where found; and although some of its features may not be exactly suited to a republican form of government, yet we doubt whether there is any system from which we can draw more important lessons of instruction. It contains much worthy the high consideration of the American public; and it may be read with profit by teachers, pupils, parents and public authorities. It contemplates, and virtually accomplishes, the education of AN ENTIRE NATION, in the knowledge and habits which fit them for the duties and business of life, and which tend to promote the good order and happiness of society. Although this model has originated under an arbitrary government, we should not be squeamish about adopting such parts of it as may promise to be beneficial here. "The true greatness of a people (or of an individual) does not consist, says M. Cousin, in borrowing nothing from others, but in borrowing whatever is good, and in perfecting whatever it appropriates. I am as great an enemy as any man, he continues, to artificial imitations, but it is mere pusillanimity to reject a thing for no other reason than because it has been thought good by others."

The schools of Germany, whether for elementary or the higher branches of instruction, have for a long time maintained an elevated rank; and it has been admitted, that literary and scientific knowledge has been more generally diffused there than in any other country. Of the German States, Prussia has held a high place in respect to learning. The great Frederick did much to improve public instruction; but it was not until 1819, that the system was matured which has given merited celebrity to the Prussian schools. M. Cousin was sent to Prussia, to examine personally into the method of public instruction. Every facility was afforded him by the public authorities to prosecute his inquiry, and arrive at correct data. The report under consideration, which was made to the minister of public instruction in France, contains the result of his labors—so far as regards elementary, or the lower order of schools.

As the subject of instruction is one of primary importance in a free government, and particularly to the agricultural community, who with us must ever, from their numbers, give the impress to our national character, and constitute the safeguard to our liberties, we feel that we are doing an acceptable service, and are perfectly within the line of duty, in laying before the readers of the Cultivator, some of the more prominent, as well as some of the commendable features, which distinguish the Prussian system of instruction.

The Prussian schools, from the highest to the lowest, are under the supervision of a minister of public instruction, and who is responsible to the king only, aided by a council of distinguished men. The kingdom is divided, to facilitate instruction, into provinces, departments, circles and parishes, which, for the sake of comparison, may be likened to our states, counties, towns and districts. Each has an organized board of officers, who have in special charge the execution of the school laws in their several spheres, and who receive their instructions, and make their reports to a higher authority. The prominent object, and every class of citizens is made to feel a deep interest in its literal fulfilment, is, to EDUCATE EVERY CHILD IN THE KINGDOM by keeping him at school at least seven years, and to ensure him a good and useful education, by employing none but *competent* teachers, prescribing the course of studies, and watching over his habits and morals. It is to do that for *every* child which a wise and prudent parent would wish to do, and ought to do, for his offspring. Popular instruction is recognized as a social duty, imperative on all for the sake of all. Some insist, that it would be an infringement of constitutional right, to make the education of their children a compulsory duty of parents here. It may be so; but it may be urged on the other hand, that education is an obligation which the parent not only owes to the child, but to the state;—and that if he has a natural right to bring up his child in ignorance, it is like other natural rights which he is bound to give up, and which he does give up, upon the altar of public good. It cannot possibly work an injury to the child. It may be said, that all children belong to the state, and that their education devolves on the state, whenever parents fail, for want of ability or inclination, to fit them to become wholesome and useful members, of society. We consent to give up personal rights, and to perform personal duties, for the common good. We contribute to build jails and poor-houses, to punish vice and alleviate want, both of which would be materially lessened by a seven years instruction of our youth in a good school. But we are wandering from our object, which is to give some of the prominent features of the Prussian system of education. This we can only do in a brief manner at present.

Duty of Parents.—The law compels all parents, or those on whom children are dependent, to keep them at school from their seventh to their fourteenth year. Children must be put to the school of the parish, unless the parent shows that he is educating them at some other school, or giving them private instruction. In case of neglect, admonition is first employed, and if this fails,

coercive means are resorted to. The child is taken to school by the police, and the parent may be punished by fine, imprisonment, and disqualification for local office. "Care is to be taken every where to furnish necessitous parents with the means of sending their children to school, by providing them with the things necessary for their instruction, or with such clothes as they stand in need of." Adequate means are provided for enforcing these regulations.

Duty of the parish, &c.—Each parish is bound to maintain a primary school; each town at least one burgher or middle school; small villages, not able to maintain a primary school, may associate with the surrounding district for this purpose.—The children must not exceed one hundred to a master. The law declares what is required for the complete maintenance of a school, in order that it may answer its end,

"1. A suitable income for masters and mistresses, and a certain provision for them when they are past service.

"2. A building for the purpose of teaching and of exercises.

"3. Furniture, books, pictures, instruments, and all things necessary for the lessons and exercises.

"4. Pecuniary assistance for the necessitous scholars."

The school committee are charged to make the salaries of teachers as high as possible, and a minimum is fixed below which the salaries shall not be reduced, in order to command the best talents and qualification. The school-house is required to be placed in a healthy situation, to be roomy, well aired, and kept with the greatest neatness.

"Every school in a village or small town shall have a garden, cultivated according to the nature of the country, either as kitchen garden, orchard, nursery-garden, or laid out for raising bees; and this garden shall be made available for the instruction of the scholars.

"Whenever the nature of the spot will admit, there shall be a gravelled plain or court, in front of the school, for the children's exercise.

"The materials necessary for instruction consists, above all, in a sufficient collection of books for the use of the school.

"There shall be, according to the degree of every school, a collection of maps and geographical instruements, models for drawing, writing, music, &c.; the instruments and collections necessary for studying mathematics and natural history; lastly, according to the extent of the system of instruction, there shall be the apparatus necessary for gymnastic exercises, and the tools and implements suited to the teaching of the mechanical arts or manufactures in the school in which that branch of knowledge is introduced.

"Moreover every school is bound to furnish gratuitously to poor scholars, books and other necessaries.

"That on occasion of any division or allotment which the parishes may make, sufficient land shall be allotted to the school-master for the cultivation of his vegetables and the feed of a cow; about two acres of good land, or more if the land is bad."

No master is allowed to collect the school monies. These must be collected by the school committee, who may pay the teachers. The teacher is not permitted to follow other business for profit, lest it should abstract his attention from his school, or lower his dignity or morality. The orphan children of school-masters have a special right to all the benefit of establishments for education, and pensions are granted to widows and orphans of school-masters.

"Masters and inspectors, says the law, must most carefully avoid every kind of constraint or annoyance to the children, on account of their particular creed, &c.

"In towns, public education and the maintenance of it are not to be postponed to any other of the parochial necessities or claims whatever.—They are to be reckoned among the objects to be provided for in the first place.

"No one shall refuse to pay the rate levied upon him under pretext that the school of his parish, or of his religious persuasion, are flourishing; since it is necessary to provide for the general education of the parish, and all schools are open to all, and may be equally profitable to every individual."

General objects and different gradations of primary instruction.—There are two stages of gradations in primary instruction, elementary schools and burgher schools.

"The elementary schools have for their object the regular developement of the faculties of man, by more or less instruction in the branches of knowledge indispensable to the lower classes, both in town and country.

"The burgher schools bring the child to that point at which peculiar aptitude for classical studies, properly so called, or for some particular profession, may manifest itself.

"*The paternal attachment of the masters, their affectionate kindness towards all their pupils, will be the most powerful means of preserving them from immoral influences, and of inciting them to virtue.*

"*No kind of punishment which has a tendency to weaken the sentiment of honour, shall on any pretence be inflicted;* corporeal punishments, in case they shall be necessary, shall be devoid of cruelty, and on no account injurious to modesty or to health."

Incorrigible scholars, or who persist in bad habits, may be expelled.

"Primary instruction shall have for its aim to develope the faculties of the soul, the reason, the senses, and the bodily strength. It shall comprehend religion and morals, the knowledge of size and numbers, of nature and man; corporeal exercises, singing, and lastly, imitation of form, by drawing and writing.

"In every school for girls, without exception, the works peculiar to the sex shall be taught.

"Every complete elementary school necessarily comprehends the following objects:—

"1. Religious instruction, as a means of forming the moral character of children according to the positive truths of Christianity.

"2. The German Language, &c.

"3. The elements of geometry, together with the general principles of drawing.

"4. Calculation and practical arithmetic.

"5. The elements of physics, geography, general history, and especially the history of Prussia.

"Care must be taken to introduce and combine these branches of knowledge with the reading and writing lessons, as much as possible, independent of the instruction which shall be given on those subjects specially.

"6. Singing; with a view to improve the voice of the children, to elevate their hearts and minds, to perfect and ennoble the popular songs, and church music or psalmody.

"7. Writing and gymnastic exercises, which fortify all the senses, and especially that of sight.

"8. The simplest manual labors, and some instructions in husbandry, according to the agriculture of the respective parts of the country."

Every scholar, on leaving school, receives a certificate of his capacity, and of his moral and religious disposition, signed by the master and the school committee.

Every burgher school shall afford instruction in religion and morals, the German language, latin, mathematics, drawing, writing, singing, gymnastics—and

"Physical science, so far as is sufficient to explain the most remarkable phenomena of nature.

"Geography and history combined, in order to give some knowledge of the earth, of the general history of the world, of the people who inhabit it, and the empires into which it is divided."

Masters are charged to study the particular character and qualities of each pupil. No special books are prescribed, that no shackles may be imposed to improvement. Masters are to adopt the methods which gradually and constantly enlarge the understandings of the children, and not such as instil mere mechanical knowledge. Examinations must be public. The authorities, the clergy and the masters are required to unite their efforts to strengthen the ties of respect and attachment between the people and the school.

We have gone thus far in explaining the organization, objects and gradations of elementary schools, and in particularizing the studies and exercises which are pursued in them. In our next number we intend to give some account of the normal schools, that is, schools for the education of masters to teach in the elementary schools. In this branch of instruction, we have hitherto had little experience, and yet it is one on which the efficiency and usefulness of our whole system of public instruction, and indeed our religious, moral, and we may add political character, very materially depends.

Those who feel most deeply, are most given to disguise their feelings; and derision is never so agonizing as when it pounces on the wanderings of misguided sensibility.

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BALTIMORE PRODUCE MARKET.

☞ *These Prices are carefully corrected every* MONDAY.

	PER.	FROM	TO
BEANS, white field,	bushel.	2 00	2 50
CATTLE, on the hoof,	100lbs.	6 50	7 00
Slaughtered,	"		
CORN, yellow,	bushel.	72	73
White,	"	73	75
COTTON, Virginia,	pound.	17½	18
North Carolina,	"		
Upland,	"	17½	18½
FEATHERS,	pound.	35	37
FLAXSEED,	bushel.	1 50	
FLOUR—Best white wheat family,	barrel.	6 25	6 75
Do. do. baker's	"	5 75	6 25
Do. do. Superfine,	"	5 00	5 25
Super Howard street,	"	5 00	
" " wagon price,	"	4 87	
City Mills, extra,	"		
Do.	"	5 25	
Susquehanna,	"	5 00	
Rye,	"	4 00	4 50
GRASS SEEDS, red Clover,	bushel.	5 00	5 25
Timothy (herds of the north)	"	2 50	3 00
Orchard,	"	3 00	3 25
Tall meadow Oat,	"	2 00	2 50
Herds, or red top,	"	1 00	1 25
HAY, in bulk,	ton.	16 00	18 00
HEMP, country, dew rotted,	pound.	6	7
" water rotted,	"	7	8
HOGS, on the hoof,	100lb.	6 00	
Slaughtered,	"		
HOPS—first sort,	pound.	12	
second,	"	10	
refuse,	"	8	
LIME,	bushel.	33	35
MUSTARD SEED, Domestic,	"	5 00	6 00
OATS,	"	36	40
PEAS, red eye,	bushel.		
Black eye,	"		1 50
Lady,	"		
PLASTER PARIS, in the stone,	ton.	3 25	
Ground,	barrel.	1 37	
PALMA CHRISTA BEAN,	bushel.	2 00	
RAGS,	pound.	3	4
RYE,	bushel.	72	73
TOBACCO, crop, common,	100 lbs	3 75	5 00
" brown and red,	"	5 00	7 00
" fine red,	"	7 00	9 00
" wrappery, suitable for segars,	"	6 00	12 00
" yellow and red,	"	8 00	12 00
" yellow,	"	9 00	12 00
" fine yellow,	"	12 00	16 00
Seconds, as in quality,	"	4 00	5 00
" ground leaf,	"	5 00	9 00
Virginia,	"	5 00	10 00
Rappahannock,	"		
Kentucky,	"	6 00	9 00
WHEAT, white,	bushel.	1 15	1 20
Red,	"	1 02	1 08
WHISKEY, 1st pf. in bbls.	gallon.	30	31
" in hhds.	"	30	30½
" wagon price,	"	27	
WAGON FREIGHTS, to Pittsburgh,	100 lbs	2 25	
To Wheeling,	"	2 50	
		washed.	*unwash*
WOOL, Prime & Saxon Fleeces,	pound.	62 *to* 75	26 *to* 28
Full Merino,	"	52 62	24 26
Three fourths Merino,	"	45 52	23 24
One half do	"	40 45	23 24
Common & one fourth Meri.	"	35 40	22 24
Pulled,	"	35 38	23 26

GAMA GRASS SEED

JUST received, and for sale at this Establishment—Price 50 cents per ounce.

The Invoice including packing mats, &c amounts to $30, and the whole will be sold for $20, which may be sent to I. I. HITCHCOCK.

Amer. Farm. Estab.

POINTER.

A FIRST rate Pointer Slut, of pure blood, 6 months old, for sale at this establishment. mh 17

BALTIMORE PROVISION MARKET.

	PER.	FROM.	TO.
APPLES,	barrel.		
BACON, hams, new,	pound.	10	11
Shoulders,	"	8	9
Middlings,	"	8	
BUTTER, printed, in lbs. & half lbs.	"	31	50
Roll,	"	20	31
CIDER,	barrel.		
CALVES, three to six weeks old	each.	3 00	6 00
COWS, new milch,	"	17 00	30 00
Dry,	"	8 00	12 00
CORN MEAL, for family use,	100lbs.	1 56	
CHOP RYE,	"	1 50	
EGGS,	dozen.	10	12
FISH, Shad, fresh,	per100	11 00	12 00
Herrings, salted, No. 1,	"	4 75	
Mackerel, No. 1, 2 & 3,	"	5 50	6 75
Cod, salted,	cwt.	2 25	
LAMBS, alive,	each.	1 25	2 00
Slaughtered,	quart'r	37	50
LARD,	pound.	9	10
ONIONS,	bushel.	75	100
POULTRY, Fowls,	dozen.	3 25	
Ducks,	"		
POTATOES, Irish,	bushel.	87	100
Sweet,	"	1 25	1 50
TURNIPS,	"		
VEAL, fore quarters,	pound.	3½	4
Hind do.	"	6½	

ADVERTISEMENTS

TRIFOLIUM INCARNATUM,
OR SCARLET CLOVER.

Just received a few casks of this valuable grass seed, lately introduced into this country from Germany, where it produces two good crops in one year. From its early growth in Spring, when other articles for feeding stock are so difficult to be procured, it is likely to become a valuable acquisition to American Husbandry. It blooms and is fit to cut in 50 days after sowing, and is not so coarse as the common Red clover, better furnished with leaves, and not liable to lodge or loose its leaves in drying. From its rapid growth it is of great value for an early crop, for soiling in summer, or for supplying food when other grasses are winter killed.

Also in store, St. Foin or Espersett, well suited for high dry soils, improving poor land, &c.

Burnet Grass, similar in character to the St. Foin, being well adapted to high, poor, dry soils.

Spring and Winter Vetches or Tares, Lucerne, Ray Grass, Feather grass, and many other rare, and common Field Seeds.

Twin Corn, producing from 4 to 8 ears on each stock.

Garden Seeds, a general assortment.

ROBT. SINCLAIR, Jr.

April 14. at Sinclair & Moore's Md. Ag. Rep.

WM. PRINCE & SONS,

NEAR N. YORK, will forward their new catalogues, *with very reduced prices*, to every applicant—

No. 1, Fruit and Ornamental Trees and Flowering plants—No. 2 Double Dahlias, and Bulbous Flowers—No. 3 Garden, Agricultural, and Flower Seeds, comprising the most extensive assortment of every class. Of the Dahlia, above 500 varieties, including all the striped and variegated kinds, and assortments of one dozen named varieties selected by us, will be supplied at $3, $4½ and $6, according to rarity, &c. Tree Roses, grafted 3 to 4 feet high, of 50 varieties, and a few dozen of Harrisons new double yellow Rose, which flowers profusely—10,000 cuttings of the Chinese Mulberry prepared for planting at $8 per 100 or $60 per 1000, to purchasers of which the secret will be imparted calculated to cause nearly all to grow. Also 35 bushels Italian Lolch seed, a superior grass, recently introduced, 20 bushels Spring Tares, 1800 lbs. White Dutch clover seed, 2000 lbs. Provence Lucerne, 500 lbs. Trifolium incarnatum, or Early Crimson clover, affording the earliest pasturage.

To nurseries and others making large purchases, a very liberal discount will be made and a convenient credit allowed.

Orders must be sent direct per mail, and will receive prompt attention. april 12. 2t

PROOF JACKS FOR SALE.

ONE of 4 years old, rising 53 inches high, an excellent performer, and a sure foal getter, so far as yet tried, which has been enough to convince his owner that he will be, when at maturity, a first rate animal in all respects. He will grow to near or quite 14 hands high. He is of a celebrated and prolific stock in Virginia. Price $600.

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March 31, 1835.

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ROBERT CARR.

☞ The usual annual spring public sale of Plants, including a large collection of the finest Prize Dahlias, will be held as soon as the weather will permit, of which due notice will be given in the papers. mh. 31.

Printed by Sands & Neilson, corner of Calvert and Market street.

THE FARMER & GARDENER;

AND LIVE-STOCK BREEDER & MANAGER.

CONDUCTED BY I. IRVINE HITCHCOCK, AND ISSUED EVERY TUESDAY FROM THE AMERICAN FARMER ESTABLISHMENT, AT $5 PER ANNUM, IN ADVANCE

No. 52. **BALTIMORE, APRIL 28, 1835.** **Vol. I**

American Farmer Establishment.

BALTIMORE: TUESDAY, APRIL 28, 1835.

CARD—VALEDICTORY.

The undersigned announces with profound respect to his customers and friends, that with the publication of the present number, his connexion with this paper ceases; he having sold it, together with all the other departments of the *American Farmer Establishment*, to Messrs. SINCLAIR & MOORE, of this city, by whom the entire establishment, united with their own, will hereafter be conducted.

The gentleman who is selected to conduct the paper is known to the undersigned to be peculiarly well qualified for the task, and the readers of the *Farmer and Gardener* may safely anticipate a high degree of both instruction and entertainment in its future numbers.

From the ample and judicious arrangements which the new proprietors have made, the expectation may be confidently cherished that all business in the Agricultural and Horticultural line will be transacted in the most satisfactory manner.

The undersigned begs leave to assure those who have heretofore patronized him, that he is not insensible of the honor they have done him, and that he shall ever recur with peculiar pleasure to the recollection of his past intercourse with them. With these sentiments and feelings, he respectfully takes leave of them, subscribing himself their friend, very truly,

I. I. HITCHCOCK.

☞ All persons indebted to the Editor for either subscription, advertising or merchandize, are respectfully requested to make immediate remittance of the amount, that all accounts may be speedily closed. He will remain a few days in Baltimore for the sole purpose of receiving such favors.

CARD.

I. I. HITCHCOCK, late proprietor of the American Farmer Establishment, Baltimore, Md. having sold out that concern *entire*, will, within the next month, (May,) open in Philadelphia an Agricultural and Horticultural Agency or Commission Office, for the purchase and sale chiefly of CHOICE DOMESTIC ANIMALS of all kinds.

He will also keep on hand, (when they can be had) the seed of the GAMA GRASS, and the SKINLESS OATS, and whatever other agricultural seeds, especially grains and grasses, he can obtain, that may be new or peculiarly valuable. He will supply also in the proper season, the MORUS MULTICAULIS, or new Chinese Mulberry, and the eggs of the Silk Worm.

He will also attend to the selection of fruit and ornamental Trees, Seeds and Plants, from the various Horticultural Establishments in and about Philadelphia.

Further particulars will be advertised hereafter.

☞Editors with whom this paper is exchanged, will confer a favor on the advertiser by giving the above card an insertion or notice.

HEMPSTEAD COUNTY, Ark. Ter., April 4, 1835.

To the Editor of the Farmer and Gardener:—

The encouraging manner in which you received my last desultory communication, induces me to *gratify* you again, by giving you some general idea of the southern part of Arkansas, which appears to be so little known abroad. That portion of the territory lying between the Louisiana line and the 34th parallel of N. latitude, is watered by the Red River and its tributaries. This river would be navigable for 1500 miles from its mouth, but for an obstruction of drifted timber, called the Great Raft, which commences some distance above Natchitoches, in La. and extends 120 miles upwards to near the state line. A wide alluvial margin, dry, and rich as human avarice could desire, borders the river through its whole extent, and is esteemed the best cotton land in the world. Lakes, formed by the shifting channel of the river, and swamps, are interspersed between the river and the hills, but are all easily drained and reclaimed. The obstruction to the navigation has hitherto retarded the growth of this country, but now this obstacle is in progress of being removed, wealth and population are pouring upon us, and the lands monopolized with excessive avidity. Along the line of the 34th parallel is a range of prairies, elevated 600 feet above the valley of the river, and forms the dividing ridge between the waters of Red River and the Washita, from 15 to 25 miles of the former, and composed, as Mr. Featherstonehaugh tells us, of a bed of calcareous marl, to an unknown depth. A black vegetable mould of from one to four feet deep, has formed on its surface, which is equal in productiveness to alluvion. These prairies, before the hand of cultivation *deformed* them, presented to the eye the most captivating scenery imaginable—gently swelling to the curve of beauty, clothed with tall, fine grass, ornamented with a thousand varieties of the richest flowers, sprinkled with shady groves, and divided by sloping valleys of the most magnificent timber. Between these prairies and the river, the land is clothed with the finest timber, gently undulating, forming delightful valleys with springs and streams of water, with every variety of soil, from the black marl to the arid sand hill, and none of it inferior to the richest lands of N. England. The whole of the upland of this section of country is underlaid with a grey marl, into which our wells and cisterns are cut, and with as much ease as cutting in wood. The diggings of our deepest wells, though firm enough when first thrown up, for hearth stones, slack and dissolve on exposure to the weather, and become the richest soil, and spread upon our worn clay or sandy land, act as the richest manure. The timbered valleys, that have been for ages accumulating the deposits of decayed vegetation, and the wash of the marl from the hills, form a soil sufficiently retentive of moisture not to be affected by drought, and yet porous enough not to be injured by excessive rains. It yields from 50 to 100 bushels corn to the acre, or 1000 to 1500 wt. of seed cotton. This quality of soil shows no symptom of decay, but the oldest fields produce the best. We have an uncommonly backward spring, at least two weeks later than usual; but now, vegetation is proceeding with proportional rapidity. The forests are assuming the livery of spring, the dogwood, the wild plum, and the red bud are exhibited in bloom, and the haw-thorn and the elm their lively green, with the ten different varieties of oaks in bloom, unfold enchanting beauty, and promise abundance of food for our domestic animals the coming winter. The grass, also, is clothing our prairies and open woods, and all nature appears in smiling youth. Though the past winter has been unusually cold, the thermometer has never sunk to within 10 degrees of zero, nor did the heat of the past summer rise above 90. We enjoy a transparent atmosphere; our rains come only in showers; and during the hottest weather we have steady refreshing breezes that sweep over an extensive arid region, and cool, delicious nights.

Our Mount Prairie country, as it is called, may justly be considered one of the healthiest in the world, and we only want a population possessed of intelligence, enterprize and industry, to render it one of the most desirable.

Respectfully yours,

NATHAN D. SMITH.

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